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THE OPHTHALMIC RECORD

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The July number of THE OPHTHALMIC RECORD will contain a Report of the Ophthalmic Section of the International Medical Congress; an original paper by J. E. Jennings, M. D., Double Hand Skiascope; one by F. C. Hotz, M. D., a case of Syphilitic Orbital Periostitis and Optic Neuritis in which vision was almost extinguished, but completely restored; one by Walter L. Pyle, M. D., a prime sequence for measuring Heterophoria. There will also appear Abstracts, Reviews, Society Reports and Personals and items of interest to the profession.

THE RECORD particularly desires short practical papers on any subject connected with Ophthalmology. These will be published at as early a date as possible. It is understood that, unless otherwise arranged, original articles, when accepted, are contributed to the RECORD exclusively. Illustrative cuts will be made at the expense of the journal, and proofs for correction will be sent to authors when desired. Reprints with covers will be furnished at cost. The RECORD will be issued monthly, and each number will contain about 54 pages of reading matter.

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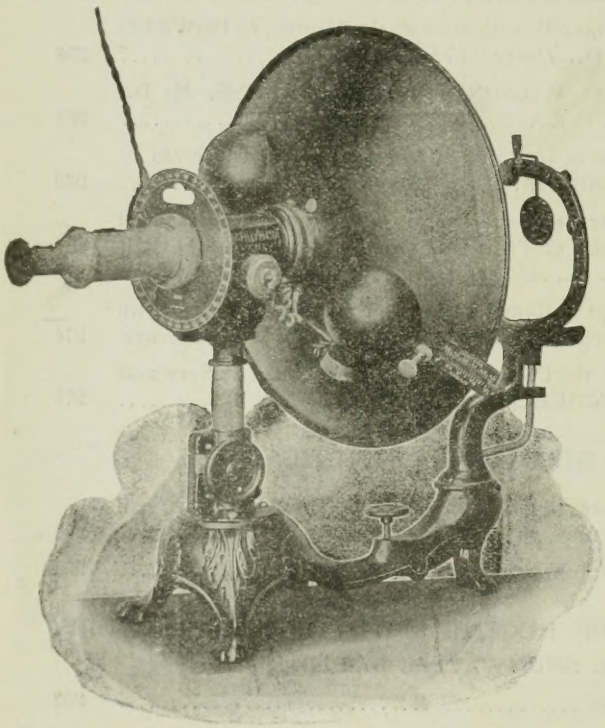

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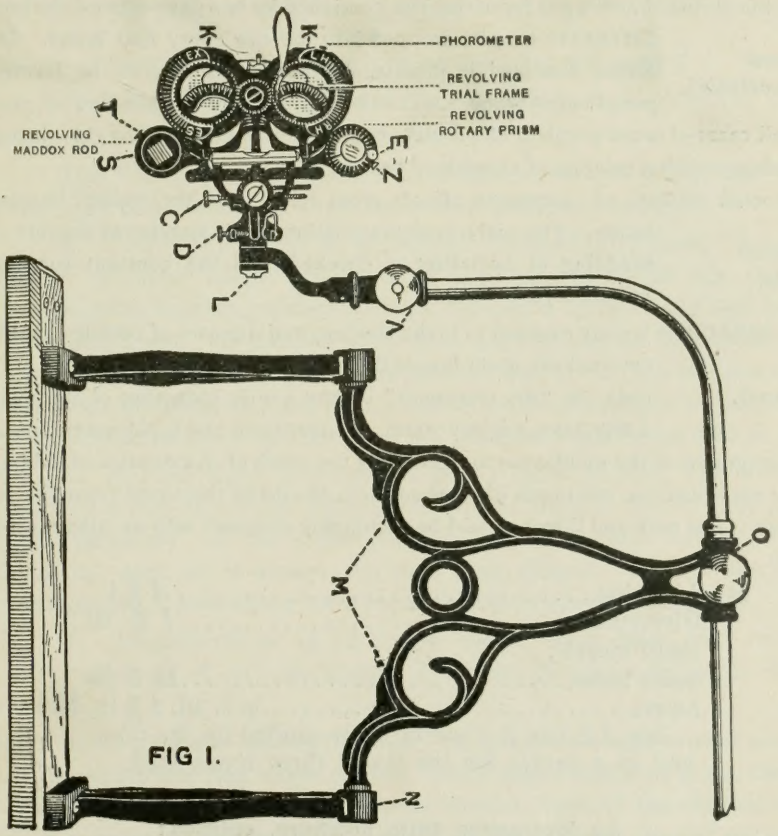

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THE
OPHTHALMIC RECORD
A MONTHLY REVIEW OF THE PROGRESS
OF OPHTHALMOLOGY.

VOLUME XII. No. 6. CHICAGO, JUNE, 1903. NEW SERIES.

ORIGINAL ARTICLES.

SOME OPHTHALMIC CASES I HAVE SEEN.

BY ALEX. W. STIRLING, M. D., C. M. (EDIN.), D. P. H. (LOND.),
ATLANTA, GEORGIA.

The following cases, which I have seen at various places, may be worth perusal. Some of them have been published before.

1. *Complete Separation of Iris and Dislocation of Lens.* A carpenter of about twenty-five years of age was hit in the eye about twenty-seven months previously by the recoil of a spring. Iris and lens were both gone. On looking down into the vitreous the iris could be seen lying at the bottom with the lens on top of it. At the macula was some choroidal atrophy giving rise to a central scotoma so that the patient saw the eyes, lips, ears, but not the nose when it was looked at.

2. *A Pink Eyed Negress.* A young adult woman, who would pass for a very fair white person, but for the negroid type of face and the "kinkiness" of the straw colored hair. The eyes are without pigment, and, as is always the case with albinos, there is marked nystagmus. I have never heard of an albino without nystagmus.

3. *Anophthalmos.* I have seen one of these cases, in a baby. The rudiments of eyes can always, I believe, be demonstrated by dissection.

4. *Atrophy of Entire Choroid.* Of this I have seen several cases. It is remarkable how acute central vision may remain in these cases. While the retinal vessels may appear normal, those of the choroid are laid completely bare to vision, and look not unlike a basket of eels. In some of the vessels no blood stream may be seen, and in others only a central thin thread within the white-walled vessels, and yet the patient may see 6/5 and J1, though the field is small.

5. On the anterior surface of the *lens capsule* one occasionally sees white dots, and I have seen them at the same time attached

to the iris, and moving with it. These are no doubt remains of the foetal fibro-vascular membrane. A distinct wrinkling of the capsule I have also seen after a blow, without other sign of rupture. In pathological sections the anterior surface of the capsule may be wrinkled, as in one of buphthalmia in my collection secondary to anterior synechia. I remember a case of a Y-shaped vessel imbedded in a very thin layer of lymph on the surface of the capsule. In the sections of ruptured lens capsule which I have seen the lesion was at the equator.

6. In connection with *Cataracts* some of the less usual cases are the following:

(a) Unilateral, in childhood, not lamellar, milky in appearance and consistence, and flowing from the lens capsule and out of the cornea when the needle is pressed to one side of the puncture. The question is whether these cases are not due to traumatism of some kind.

(b) The senile lens may absorb, nucleus and all. The oldest case I remember to have seen was 46, but I know that the lens has been needled at an age greater than that and has disappeared completely.

(c) One of the most peculiarly shaped cataracts I have seen was tri radiate, each bar having a ball attached to one and the same side of its distal extremity, like three crotchets fastened together at one end. The patient was a young man.

THE OPHTHALMOSCOPIC EXAMINATION OF THE MACULA.[1]

BY EDWARD JACKSON, M. D.,
DENVER, COLO.

The interest awakened in this subject by the magnificent demonstrations with the Thorner Ophthalmoscope, make it especially appropriate for discussion at the present time. There is danger that in the new enthusiasm it may be forgotten that the region of the macula can be seen without widely dilating the pupil, flooding the eye with a powerful light, carefully adjusting the patient's head to a fixed position, and looking through an elaborate and expensive instrument.

[1] Read before the Colorado Ophthalmological Society, March, 1903.

There is also need to guard against the mistake thus alluded to by W. Adams Frost (*The Fundus Oculi*, p. 66): "Ophthalmoscopic examination of the macula without the previous employment of a mydriatic is often difficult, because the pupil contracts strongly when the light falls on this region, and also because the corneal reflection of the mirror lies in the line of sight. Hence many observers are less familiar with the physiological variations of this part than they are with those of the optic disc. Consequently, when an unexplained amblyopia leads to a thorough examination, changes of the macula are apt to be diagnosed on rather insufficient evidence."

Without questioning the splendor of the general view of the macular region, which may be obtained with the demonstrating ophthalmoscope, especially that of Thorner, or the importance of being able to exhibit particular fundus changes to those who are not expert ophthalmoscopists, it seems worth while to call attention to what can be done in studying the macula with the ordinary hand ophthalmoscope; and to the best ways to meet the peculiar difficulties that have to be overcome, when making the examination through the undilated pupil.

These difficulties arise from the corneal reflex, and the physiological contraction of the pupil caused by strong illumination of the retina. If the little image of the lamp flame reflected from the patient's cornea could be perfectly focused upon the observer's retina, it would be so small that it would not seriously interfere with the ophthalmoscopic examination, as indeed it does not by the indirect method. But in the direct examination it cannot be so focused; and the circle of diffusion that it forms is so brilliant, as compared with the fundus illumination, that the details of the macula cannot be seen through it. The ophthalmoscopic examination by the direct method, the best for studying details of the macula, must be made by looking to one side of this reflex. To do this the reflex must be made as small as possible, by reducing the size of the sight-hole.

TO REDUCE THE CORNEAL REFLEX.

With the surgeon's eye at 25 or 30 mm. from the eye of the patient, if it were not for the smaller sight-hole, the apparent size of the light reflex on the patient's cornea would be about the size of the surgeon's pupil. If the pupils of surgeon and patient were of the same size, the light reflex would just cover the patient's pupil. If, as is common under the conditions of the ophthalmoscopic examination, the surgeon's pupil were the larger, the light reflex would more than cover the pupil of the patient.

This may be understood by examination of Figs. 1 and 2. Fig. 1 represents the surgeon's eye having its anterior focus at A. (15.5 mm. in front of the anterior focal plane, or 13.5 mm. in front of the cornea). Rays diverging from this anterior focus, will be parallel in the vitreous and fall upon the retina, forming a circle of diffusion having the diameter R S, equal to the diameter of the pupil.

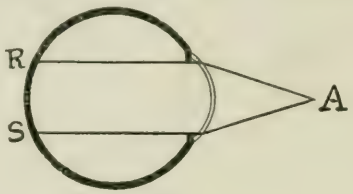

FIG. 1.

If, however, the rays come from a point twice as far from the eye as its anterior focus, (29 mm. in front of the cornea), they will tend in the vitreous toward a focus twice as far back from the posterior principal plane of refraction, as is the posterior focus of the eye; and the pencil of rays reaching the retina at the posterior focus would have half the diameter of the pupil.

Thus, in Fig. 2 suppose the small corneal image of the light flame which causes the reflex to be situated (as it is approximately when making the direct ophthalmoscopic examination) at P, twice as far from the eye as A the anterior focus. Then R S the diameter of

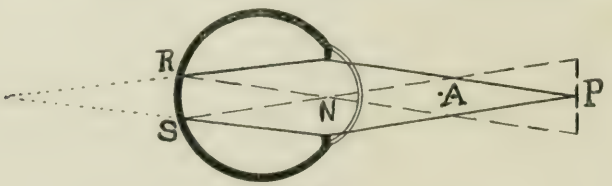

FIG. 2.

the circle of diffusion will be half the diameter of the pupil. This circle of diffusion projected outwards upon the patient's eye, will have an apparent size about double that of the circle at R S; because the distance of P from N, the nodal point, is just about double the distance of N from the retina at R S. That is, the circle projected at P would be about the same size as the surgeon's pupil.

Diminishing the size of the sight-hole, diminishes proportionately the circle of diffusion. It does not diminish the circle of diffusion quite so rapidly, as contraction of the surgeon's pupil would diminish it. The sight-hole is one-fifth to one-third nearer the corneal reflex

than is the surgeon's pupil. Hence the circle of diffusion admitted by it will be one-fifth to one-third larger than the sight-hole. Under the usual conditions of examination, the corneal reflex will appear one-fifth to one-third larger than the sight-hole through which it is viewed.

The size of the patient's pupil, and the size of the sight-hole in the mirror determine the difficulty of seeing past the corneal reflex to examine the region of the macula. With the sight-hole 1.5 mm. in diameter, the apparent size of the corneal reflex need not be more than 2 mm. The majority of eyes examined in a good dark-room with rather feeble illumination, will show pupils of 3.5 mm., or more in diameter, even when the light is reflected upon the center of the macula.

With a sight-hole of 1.5 to 2 mm. one can study the region of the macula, and recognize the important details of the ophthalmoscopic picture in a large majority of eyes. With a sight-hole of 3.5 or 4 mm., such as Loring adopted for his ophthalmoscope, the recognition of details in the macula with the undilated pupil, becomes more difficult. And with a larger sight-hole still, it would be quite impossible, were it not for the principle of the half mirror to be presently referred to. The larger sight-hole was chosen by Loring, not to facilitate the examination of the fundus oculi, but to increase the accuracy of the ophthalmoscope as an instrument for measuring refraction.

On going over this matter some years ago, it seemed to me that an additional exactness in the measurement of refraction with the ophthalmoscope did not compensate for its diminished efficiency as an instrument for examining the fundus of the eye. I therefore chose for my ophthalmoscope, a sight-hole 2 mm. in diameter. My experience with such a sight-hole indicates that for general use a still smaller one would be more satisfactory. Certainly for the examination of the macula, a sight-hole 1.5 mm. in diameter is to be preferred.

THE HALF MIRROR.

The ordinary ophthalmoscopic mirror throws into the patient's eye a pencil of rays as large as the pupil, less the part lost on account of the sight-hole. But the Thorner ophthalmoscope, and the electric light ophthalmoscope of Wolff, Suker, and De Zeng employ a mirror which is intended to throw light into only one-half of the patient's pupil; while the surgeon's eye placed behind the edge of the mirror receives light only through the other half of the pupil. By this arrangement the corneal reflex is made to cover only the half of

the pupil which the surgeon does not look through. Something of the same effect may be gotten with the ordinary ophthalmoscope having a large sight-hole, by holding the instrument to one side so that the edge of the sight-hole will come in front of the center of the surgeon's pupil. Doing this, one sees the corneal reflex removed to one side; and reduced, so as to allow details of the fundus to be easily seen beside it. Were it not for the (often unconscious) adoption of this plan, it would generally be impossible to examine the macula with the ordinary Loring ophthalmoscope. But even used in this way the mirror with a large sight-hole is inferior to both the one with a small sight-hole, and to the half mirror.

THE VISIBLE FIELD.

The portion of the fundus visible at any one time by the direct method of examination, depends upon the nearness of the surgeon's eye to the patient's pupil, and the size of that pupil. If the surgeon could bring his own nodal point to the anterior focus of the patient's eye, the visible field would include a circle just the diameter of the patient's pupil. This is illustrated by Fig. 1, by taking it to represent the patient's eye. If the surgeon could place his own anterior nodal point at A the part of the patient's retina visible to him would be circle having the diameter R S equal to that of the patient's pupil. But when the distance between the eyes is twice as great, about as close as it can be in practice, the visible portion of the retina will be half the diameter of the patient's pupil.

The contraction of the pupil when the macula is strongly illuminated, lessens the portion of that region visible at any one time. On this account the visible field at the macula may have only one-half the diameter, one-fourth the area of the portion visible when the optic disc is looked at. This makes it necessary when examining the macula to bring one's eyes just as close as possible to the patient's pupil. It also limits the strength of the light that can be used to illuminate the retina. A very strong light reduces the pupil so much, as to greatly diminish the visible area; even when the surgeon's eye is brought as close as possible to the patient's.

ILLUMINATION OF THE RETINA.

As compared with other portions of the eye-ground, the region of the macula is of decidedly darker color. The physiological peculiarities and the pathological changes of appearance that it presents are usually minute and difficult to discover. Hence strong illumination would be of especial assistance in examining this part of the

fundus. The chief conditions of strong illumination are excluded by the necessity for keeping the pupil as large as possible. Still some important things can be done to improve the retinal illumination.

The contraction of the pupil depends upon the total light entering both eyes. By making the examination in a thoroughly darkened room, with the patient facing a black wall, much light that would help to contract the pupil will be excluded, allowing more of the light that furnishes useful illumination to be thrown on the retina. Then the light that does enter the eye must be concentrated wholly on the part of the retina to be examined. To do this the mirror must have such a focal length that all the light it reflects through the pupil will all fall within the visible area.

When there is necessity for a particularly strong illumination, it may be concentrated on a small part of the visible area. By this concentration of the light on a particular point to be examined, a very good illumination of the retina can be obtained at the macula, in most eyes without use of a mydriatic. Of course this plan of concentrating upon a small portion renders a general survey of the fundus tedious and unsatisfactory. But it does enable us to carefully study to advantage small lesions in the macula with the ordinary ophthalmoscope, and an undilated pupil.

The mirror which will give the greatest concentration of light on the retina, will be the one that accurately focuses on the retina the light from the source used. In a relaxed emmetropic eye parallel rays will be focused on the retina, and the lamp flame will need to be placed at the principal focus of the ophthalmoscope mirror to render the rays parallel. For an eye with 2 D. of hyperopia the rays must be rendered 2 D. convergent. To do this with a mirror having a focal distance of eight inches, the lamp flame should be placed thirteen inches from it.

To get the best illumination of the retina it might be supposed that quite a series of mirrors of different focal lengths would be required. But variations in the distance of the source of light may be supplemented by lenses placed in front of the eye. These will, in effect, change the refraction to suit the mirror used. This expedient is of especial value in cases of high myopia, in which the light would otherwise be diffused over a wide region extending beyond the visible field.

When instead of inspection under strong illumination of a minute portion of the retina, one wishes to make a general survey of the visible area, the same means, the appropriate placing of the source

of light, the use of a lens in a trial frame before the eye, may be employed to secure the needed circle of diffusion—just as large as the visible field of the retina.

SUMMARY.

The region of the macula can usually be examined with the ordinary ophthalmoscope through the undilated pupil, if the instrument be used to the best advantage.

The corneal reflex can be so reduced as to allow the surgeon to see through the pupil alongside of it: By making the sight-hole small, 1.5 mm. in diameter, by holding the sight-hole so that one edge of it is in front of the center of the surgeon's pupil, or by using the half mirror.

The visible field can be enlarged by getting close to the patient's pupil and excluding all unnecessary light.

The illumination of the retina can be rendered brilliant at a certain point, or diffused equally over the whole visible field: By adjustment of the source of light at the proper distance from the mirror; and by placing the right lens in a trial frame before the patient's eye.

SPRING CATARRH.*

BY WILSON PRESTMAN MALONE, M. D.

Washington, D. C.

Spring catarrh was first described by Arlt in 1848; he considered it a peculiar variety of Conjunctivitis Lymphatica. Subsequently, Desmarres mentioned it under the title of Hypertrophic Perikeratique. Von. Graefe spoke of it as gelatenous thickening of the limous. Hirschburg as Phlyctenula Pallida. Saemisch, who was the first to bring into prominence the characteristic exacerbations during the warm season, called it Vernal Catarrh. Raymond de Furin was the first to draw attention to its complications. Horner studied especially the complications of the palpebral conjunctivae and pointed out that in almost all cases characterized by pericorneal changes (nine cases out of ten) there is found a papillary hypertrophy of the conjunctivae of the upper lid. Burnett was the first to call attention to the peculiar discoloration of the bulba conjunctivae in the negro.

Spring Catarrh is a chronic disease of the conjunctivae most frequently seen in childhood and youth although adults do not escape. Vetsch reports a case in a woman of thirty-seven; Duane in one of

* Read before the Ophthalmological and Oto'ogical Society at Washington, D. C., February, 1902.

thirty; my cases have ranged between two and twenty-five years. It causes very characteristic changes in the conjunctivae of the lids and ball. The patients usually complain of photophobia, stinging pain, great itching with the addition of a stringy muco-purulent secretion which coming across the cornea interferes with the vision; they also inform us that these symptoms are aggravated by warm weather and that a few cool days in summer give temporary relief; and that the annoying symptoms almost entirely disappear during the winter months but return in the spring.

Characteristic as the subjective symptoms are, the objective symptoms are more so. Upon examining the eye we may find only the conjunctivae covering the tarsus involved, that is, the tarsal variety; or, it may be limited to the conjunctivae of the ball, that is, the bulba variety; or, both may be affected at the same time. Considering first the pathological changes in the upper lid, we find upon everting the same a most characteristic, pathognomonic condition of the conjunctiva over the tarsus, it being covered with broad, flattened, papilliform excresences deeply seamed and furrowed, thus giving in miniature the appearance of a rough, irregularly paved street; over the whole is a delicate, bluish-white film as if a thin layer of milk had been spread over the conjunctiva. The growths may be so large and so numerous as to cover the entire surface of the lid or may be few and small and yet none the less characteristic.

Last summer I saw a case in which the circumcorneal hypertrophy was particularly well marked, the conjunctivae discolored but only three small, flattened granulations in the center of the right lid close together and the size of a small pin head.

We have even a more characteristic appearance if the bulba conjunctivae be involved; as it is thickened and unequally raised at the limbus (hence the name, circumcorneal hypertrophy), forming pale, translucent or waxy nodules encroaching upon the cornea but extending to a greater distance outward into the conjunctiva of the sclerotic. Over the nodules the epithelial layer is uneven and thicker than normal. The nodules are more prominent in the intrapalpebral space being somewhat flattened above and below from the mechanical pressure of the lids. The changes in the cornea may be at only a few points, but usually involve the entire circumference, extending furtherest over its surface above and below. I believe that in most cases this change begins first at the superior limbus, then the inferior, and lastly, the sides become involved. Duane reports two cases, in one of which the morbid process involved the entire cornea, and in the other,

a small central area alone escaped. Von Millegan says such cases are frequently seen in Constantinople, where this disease occurs much oftener than it does here.

Burnett was the first to call attention to the peculiar and remarkable appearance of the conjunctivae of the negro in this disease and so complete is his description that I cannot do better than to quote it verbatim: "This consists in a brownish discoloration of the conjunctival tissue, most intense at the scleral base of the mass, and gradually fading away toward the equator of the ball. This discoloration, which is undoubtedly situated in the conjunctival tissue itself, as well as in the epithelial layer, is not regular in its distribution but appears to consist of a collection of small deposits of brown pigment. These deposits are sometimes collected in rather large masses, particularly near the base of the elevation, but towards the equator they appear as small, brownish specks in the dull and succulent conjunctiva. In some instances this brownish discoloration extends but 3 mm. from the circum-corneal elevation, while in others it reaches almost to the canthus. It does not usually extend so far towards the equator of the globe in either superior or inferior direction. In one case I have seen the whole of the conjunctiva visible through the palpebral opening present this dirty, light-brown appearance in striking contrast to the brilliant, white aspect which the sclera usually presents in this race." In every case that I have seen in the negro I observed this condition.

Theobald says: "I cannot recall a single instance in which I have met with both types (*i. e.*, pericorneal and tarsal) co-existing in the same individual." Burnett claims that the tarsal conjunctivae is involved in all cases though the granulations may be so delicate as to resemble "fine meal grains" and found only along the posterior border. In all of my cases in the negro, ten, I found *both types* but the pericorneal was much the worse and I am inclined to think that in the negro the pericorneal variety is much the most common form; the morbid process first attacking the bulba conjunctiva, the palpebral conjunctiva becoming secondarily involved. Conversely, we have the opposite condition in the white race. The morbid process seeming to attack first and chiefly the palpebral conjunctiva and in the majority of cases being confined thereto.

The text-books, with scarcely an exception, discuss this disease only briefly, and it is often mistaken for Phlyctenula Keratitis but most frequently for Conjunctivitis Granulosa especially in those cases in which there is an entire absence of pericorneal changes, and such cases are not at all rare especially in the white race. H. Gradle has

called attention to the same fact and reports twelve cases in which only one presented very small pericorneal nodules: the majority of these cases had been diagnosed as Trachoma by most of the Ophthalmic surgeons who had been previously consulted. (Archives of Ophth. XXIV.)

At the annual meeting of the British Medical Association held in Montreal in 1897, the president, Dr. Edward Nettleship in discussing this disease said: "In tarsal cases there is sometimes very great difficulty in distinguishing between it and Trachoma." Darier says, "a confrere in the province sent me in August, 1896, a patient with the diagnosis reached by him and four other oculists of Conjunctivae Granulosa. I had hardly everted the upper lid when I recognized the so-called Trachoma as a most typical and characteristic case of the tarsal variety of Spring Catarrh."

Indeed some writers claim that Trachoma and Spring Catarrh are pathologically the same disease. In the pathology of the disease I will show this to be impossible. The history and a careful examination should enable one to readily make a differential diagnosis.

PATHOLOGY:

Darier says: "In the acute stages of Trachoma the granulations are characterized more by their contents which are seen, as it were, by their transparency than by their papillary hypertrophy; they become solid and hard only by subsequent hypertrophy of the connective tissue which only supervenes slowly, while from its commencement the tarsal form of Spring Catarrh is characterized by a dense and hard papillomatous hypertrophy which never shows even the slightest center of softening or breaking down."

H. Villard, Annals of Oph., 1897, says:

"I. The epithelium changes its character and becomes stratified pavement except in furrows where it preserves its cylindrical character.

II. It contains mucous cells especially numerous in its furrows.

III. It is invaded by migratory leucocytes.

All these characters closely identify it with the epithelium of Trachoma, *but it is a mere resemblance and not* a true identity of structure.

Below the epithelium we find a tissue which is dense and compact, and presents the following structure: It is formed of fibrous bands which are sometimes very thick and anastomose with each other and form a large fibrous frame-work analogous to the fibrous tissue of the tarsus with which it seems to be continuous. Among the large

bands are found finer fibrous fasciuli which anastomose with each other. The outer spaces of this very well-developed fibrous stroma are filled with numerous white corpuscles presenting a strong resemblance to those white corpuscles with a single nucleus seen in granulations. These are therefore large leucocytes with a round or oval nucleus, which stain well with haematoxylin.

These leucocytes are never grouped in nodules; they are scattered everywhere in the deep as well as in the superficial portions of the section. If in any one spot they form slightly more enlarged masses than in another it follows that in that spot the fibrous bands are less compact and dense and permit the accumulations of the leucocytes; but these accumulations are always irregular and non-encapsulated; what is more, at the edges of these pseudo-nodules the leucocytes merge insensibly into that of the surrounding tissue.

These leucocytes with a single neucleus are not the only ones met with in the substance of the tissue of Spring Catarrh; in many places a considerable number of these leucocytes, with several nuclei, are found in process of migration as is indicated by their elongated form.

Vessels are rather rare in this fibrous tissue; some of these are filled with leucocytes. In some cases the nuclei of the endothelial cells of the vessel-wall *are swollen* which indicates *very clearly* their inflammatory nature. The leucocytes do not appear more numerous around the vessels than in other parts of the section. In some sections are found culs-de-sac of the meibomian glands and these are quite normal. The tissue proper of Spring Catarrh is entirely different in its minute structure from that of Trachoma; the principal difference which I have mentioned may be summed up under the following heads:

I. Leucocytic and diffuse infiltration; the masses of leucocytes do not form nodules which are clearly defined, easily distinguished from the surrounding tissue and which are ordinarily enclosed in a connective tissue capsule with very fine fibers as is seen in Trachoma.

II. The leucocytic infiltration has not the same situation as in Trachoma. I have shown that the tarsal conjunctivae may be separated into two quite different layers; a superficial or mucous one, formed of delicate connective tissue infiltrated with numerous leucocytes; and a deep or fibrous layer formed of thick, dense bundles of connective tissue so closely crowded as to scarcely permit infiltration by leucocytes. I have also shown that the granulations develop exclusively in the superficial or mucous layer and never invade the deep or fibrous layer into which they merely dip down slightly. Now, nothing like this is

seen in Spring Catarrh; the leucocytic infiltration far from being limited to the superficial or mucous layer is generally found in both layers of the conjunctivae. It is a topographical distribution of prime importance which completely differentiates it from Trachoma.

III. The fibrous tissue which forms the principal part of the tissue of Spring Catarrh is a tissue with thick resisting bands and differs totally from the connective tissue with generally thin and delicate bands of Trachoma.

According to Vetsch we may have one of three endings; it may disappear completely; or, the corneal limbus may become permanently thickened, giving the cornea a narrow, contracted appearance; or, it may result in genuine corneal opacity.

So far no one seems to have found a successful treatment for this most obstinate and annoying affection although some cures have been reported. The question might arise were these cures post hoc or propter hoc as the disease may disappear of itself.

It is very evident that the treatment for the tarsal variety must differ from that for the bulba. Noyes and Nettleship think that cauterization is the best treatment for the tarsal form. I have tried this faithfully but with negative results. Darier reports a cure by "shaving off the growths with a long scalpel down to healthy cartilage." He further says that if the growths are not numerous "scarifications, incisions close together and crossed—repeated in four days—will produce a relative cure in two months. May have to be repeated for two or three springs." Theobald (Annals Opth., January, 1897), reports two cases in which Knapps roller forceps were used; one cured and the other greatly improved. In severe cases may have to use forceps several times. Meyer recommends a specially devised rubber coil for applying cold water to the lids, of course this is not expected to cure but is most grateful to the patient. Many ointments and drops have been recommended but none appear to be of much benefit.

For the bulba variety, so far as I am aware, the treatment has been medicinal with one exception. Dr. Reeves reports curing a case by scraping away all of the diseased tissue about the cornea and says: "The effect was magical, no reaction whatever."

Pagenstecker recommends massage twice a day with strong precipitate ointment. Schwanzy, weak ointments, cold sponging or iodoform ointment 1 to 15, once a day. Meyer, calomel and iodoform insufflations. Fuchs 3 per cent boracic acid solution and 1 to 2 per cent of white precipitate ointment; for the itching and photophobia 2 per cent solution cocaine. Darier, massage with mercurial ointment

made up with lanoline. Randolph at the annual meeting of the British Medical Association in 1897 reported two cases cured with salicylic acid ointment 6 to 10 grains to the oz., rubbed in well twice a day and solution soda salicylate 10 grains to the oz. of water dropped into the eye every four hours. In a letter of very recent date, he says: "Since the publication of the above I have not had the success I would wish but it still does better work for me than anything else I have tried." DeWecker, Horner and others recommend constitutional treatment, especially arsenic.

Regarding the treatment of the bulba variety I have nothing to add as I have not succeeded in curing any cases. For the subjective symptoms I use soda salicylate 10 grs., cocaine gr. 2 to 5 to the oz. four or five times a day. This is very soothing and gives more relief than anything else I have used. With the tarsal growths I have been more fortunate. I have operated three times; in the first case, which was the worst I have ever seen, I cut the growths off smooth and cauterized their base thoroughly. This I repeated several times but in a few weeks the growths would return. The reaction was considerably more than in the operation to be described. In the other two cases (the first in private practice and the second in the Children's Hospital in September, 1900), under the influence of cocaine I curetted the diseased surface thoroughly, breaking up all the papillomatous excrescences, using one blade of a pair of fixation forceps for the purpose, a pair with five or six teeth is best, then with a small, stiff tooth-brush, the bristles of which had been cut down to a fourth of an inch or less, I brushed back and forth with considerable force until all the diseased tissue was removed and we had a clear cartilage before us. If you have been *clean* in your operation there is *no* reaction and in a few days we have macroscopically a new conjunctiva. One case was cured and the other greatly improved, failing I think to be a complete cure because the brushing was not sufficiently thorough. I believe that in this way we can remove from the tarsal cartilage all of the diseased tissue, and if this is done we should have a cure.

A NOTE ON THE USE OF JEQUIRITOL AND JEQUIRITOL SERUM. (MERCK).

BY CASEY A. WOOD, M. D.,
CHICAGO.

Probably in consequence of some remarks made in the *Practical Medicine Series* and elsewhere favorable to the above remedies, I have been frequently asked to describe more exactly the manner of their employment. I have, therefore, taken the liberty of translating Merck's circular and of adding a few observations of my own for the benefit of those who have not used jequiritol, or who have not read Roemer's articles on the subject.

Jequiritol and jequiritol serum were introduced into ophthalmology by Dr. Roemer of Wurtzburg—for particulars his article on the subject is recommended.

It is used in the treatment of just such forms of chronic inflammation of the eyes as, formerly, the infusion of jequirity was used.

The new method is so much superior to the old that its introduction into practice must be looked upon as a decided advance in the conduct, especially of pannus and other trachoma sequelae. Jequiritol is an extract made from the seed of abrus precatorius after several improved methods and particular precautions. It is used in a sterile solution mixed with 50 per cent glycerine so that an exact dose can be given without evil effects, which was not possible with abrin or the old infusion. It comes in four different degrees of strength. No. 1 is the standard strength. A subcutaneous injection of 0.01 ccm. of this solution kills a white mouse weighing 20 grams, in four days. The strength of the others is on the label. The jequiritol serum is made on the Behring principle, like the abrin serum of Ehrlich, which has the power of neutralizing the poisonous effect of jequiritol when applied locally to the human conjunctivae, or given hypodermically. This is mixed with 0.25 per cent carbolic acid and 1.1 ccm. will render immune a mouse against 100 times the usual lethal dose, when both are mixed and given subcutaneously.

Directions for use (Roemer): A single drop (0.01 ccm.) of No. 1 is dropped into the eye by means of the capillary tube. If nothing happens, the dose must be daily increased until a typical jequiritol inflammation is set up. Sometimes no reaction occurs until No. 2 is used, when the acute inflammation is finally induced, and subsides in a few days; then the eye will stand a still stronger dose. Immunity is obtained after a number of inflammatory attacks, and at last the

strongest dose produces no effect. In this way treatment goes on, allowing the absorption of trachomatous exudates, pannus, corneal opacities, etc. If twenty-four hours after the employment of a dose the inflammation appears to be too severe, several drops of the jequiritol serum should be instilled into the eye frequently during the day. If these directions are carefully followed, it will rarely happen that the subcutaneous employment of the jequiritol will be required. The results in the very chronic cicatricial forms of trachoma with old pannus are extremely good.

On the neck of each vial will be found an etched ring and at one point in it a notch made by a file, at which the top can be readily broken. The neck of the bottle is covered with a glass cup which afterwards serves for a cover. The pipette should be cleansed *after* using. No alcohol or carbolic acid should be employed *before* using, as these agents coagulate the jequiritol. Dr. Roemer's first article is entitled, Experimentelle Untersuchungen über Abrin—(Jequiritol)—Immunität als Grundlagen einer rationellen Jequirity-Therapie. Graefe's Archiv für Ophthalmologie. Band LII. Heft 1, 1901.

THE ACTION ON MUCOUS MEMBRANES OF SILVER SALTS, WITH ESPECIAL REFERENCE TO SOME OF THEIR NEW ORGANIC FORMS.

BY ARTHUR G. HOBBS, M. D.,

ATLANTA, GA.

Ophthalmic and Aural Surgeon to Presbyterian Hospital.

To discuss the therapeutic action of the silver salts from any point of view, the nitrate is the first that would naturally present itself to our minds, since it has been one of the staples in Materia Medica from time immemorial.

Its potency is so great that ofttimes its misuse has resulted in much damage. In ignorant hands this inorganic form of silver is a dangerous remedy. Like all other things of potentiality, its misuse may result in as much disaster as its proper use may do good. Like fire, nitrate of silver should be applied with discretion—good in its place and in proper strengths—but equally as bad when used without thought.

Should I not say that it is, from a clinical standpoint, more like

* Read before the Georgia State Medical Association and before the staff of the Presbyterian Hospital of Atlanta.

electricity, potential either for good or evil, according to the intelligence of him who applies it? Yet many of its disadvantages in some cases prove to be its advantages in others, and the vice versa is as equally true. The nitrate of silver can be used much stronger, with not only better results, but with much less of its objectionable features, on squamous mucous membranes, such for example as we find on the deglutation part of the throat, than upon the columnar, and more especially upon the columnar-ciliated mucous membranes. Its irritative and caustic properties are especially objectionable to both the columnar and to the columnar-cilliated form of epithelii.

We may in a general way remember, that mucous membranes that are subjected to wear and tear are of the squamous variety, the columnar next and then the columnar-cilliated. The last especially resists less the contact or touch of anything foreign, and especially of anything that is irritating or caustic.

A much stronger solution of the inorganic salt can be applied, and advantageously so, to the lower pharynx and tonsils, than to the upper pharynx and nasal mucous membranes, and still a lesser strength must be applied to the Eustachian tube with its columnar-ciliated epithelium.

This rule applies to all other mucous membrane tracts and cavities. Hence one of the chief objections to our old standby—the nitrate of silver—is its irritating after effects, and this applies whether we use it on the conjunctive, in the urethra, or on the nasal mucous membrane, with the exception only that mucous membranes of the squamous variety are always, and under all circumstances, benefitted by it, when the strength is properly considered. But when it is used on either a columnar of a columnar-ciliated epithelium, in any considerable strength, it coagulates and destroys the outer layers and does not penetrate into the mucous membrane layer proper. It is upon this idea alone that all the new organic preparations of silver are, or can be based.

Yet one word more about the inorganic form: In its greater strengths it does just what we want it to do, under certain conditions. It cauterizes and destroys already broken down tissues and stimulates a new and healthy growth beneath, but just here come the questions: How strong shall it be? When and where shall we use it? What is the character of the membrane upon which we should use it?

Nitrate of silver is not yet relegated as a past number, and perhaps it never will be, however many substitutes it may have, since there are some forms of mucous membrane necroses in which it is an

ideal applicant, not to mention the many other conditions in which it is most appropriate in its weaker forms.

It is somewhat analogous in its effects to quinine in its action in its different strengths. As quinine is tonic, antipyretic or antiphlogistic according to its dose, so is nitrate of silver stimulant, sedative and caustic, according to where it is applied and in what strengths. If applied too strong it may produce a stricture in the urethra, a stenosis in the nasal cavity, or a symblepharon of the conjunctiva.

And now we are brought face to face with some of the claims of the new organic forms of the salt after having placed our reliance for so many years upon this one that is inorganic.

Some of the recent proteid silver salts have in a measure and under certain conditions, already taken the place of our old standby, and justly so. They are better than it in some cases, because they are eliminated of its irritating and caustic properties.

Protargal, argyrol and albargin are the commercial names given to some of the most prominent of these organic salts of silver. The first, protargal, I believe has been the most useful as a substitute of the nitrate in genito-urinary practice, but it can be so substituted, and with much advantage to the mucous membranes of all other tracts and cavities, especially where the lining is either columnar or columnar-ciliated, and when the subjective irritation is a consideration.

I shall not go into its genito-urinary adaptations since I have had no experience with its use in that line, but suffice it to say that if we can judge by its voluminous literature, it would seem to have almost superceded the nitrate, just as argyrol is superceding the older salt in the ophthalmias.

Even the old and classical Crede's method is rapidly giving way to the use of argyrol in the largest lying-in-hospitals, not only in this country but in Europe, mainly because of its non-irritant and non-caustic properties, but also because it penetrates deeper into the mucousa and is more decidedly bacteriological in its effects. Albargin, which contains a much less percentage of silver than argyrol, is a jelatose silver and hence seems to give up its base more gradually, more slowly, and to have deeper penetrating properties than some of the others, and for these reasons in some cases, may produce a more desirable effect. While there are still other proteid organic compounds of silver, all of which are based upon the idea of substituting, or improving upon the old inorganic form, I have not had enough experience with them to do them justice just now.

The object of this paper has simply been to call attention to the

fact that we must recognize and test this new idea, that so many chemists are now working upon, viz., that some ideal silver salt can be produced upon an organic or proteid basis that will eliminate the objectionable features of the nitrate. The literature on the use of these new organic silver salts has been voluminous during the past few years and I must refer you to it in this short paper for the exact indications and strengths of each. But I will herewith attach a full bibliography that you may have if you wish to pursue the subject as to the adaptation of each. As I have already stated, it has been my object only to impress the fact that we must recognize this comparatively new idea of silver in its organic compounds and that we must finally decide which of them we shall use? When we shall use it? Upon what mucous membrane and in what strength?

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INEFFECTUAL ATTEMPT TO REMOVE A PIECE OF STEEL FROM THE EYE WITH THE HAAB MAGNET.

BY WILLIAM H. WILDER, M. D.,

CHICAGO, ILL.

C. P., 42 years old, while hammering an iron hoop on a barrel was hit on the left upper lid with a small splinter of iron or steel. The small wound bled profusely, and he noticed that the sight of the left eye soon became very dim. Two days later, on February 2, 1903, he consulted me, when it was discovered that the particle of metal had passed through the upper lid and had penetrated the eye ball, making a small vertical cut through the upper limbus involving the iris and lens. The lens was becoming opaque and the media turbid. The cut was about 3 mm. in length involving the ciliary region, and to it the iris was adherent. The vision of the eye was 20/120, that of the right was 20/30. The pupil would not dilate fully with atropin. A small black spot seen behind the cut suggested either a foreign body or iris pigment. No foreign body could be seen in the vitreous. An X-Ray picture, however, showed a small opaque spot well back in the lower part of the vitreous chamber. On the afternoon of the same day, February 2, an attempt was made to remove the steel with the Haab magnet, Dr. W. A. Fisher kindly placing his instrument at my disposal, and rendering assistance. Although the sitting was prolonged for more than half an hour, the search was fruitless, for not only was the steel not removed, but the patient did not experience any sensation as if it were being drawn upon. He was given bichloride irrigation 1-5000, sodium salicylate grs. xv every three hours, frequent hot applications and bandage. The vision was falling rapidly, and by the next morning it was reduced to perception of light and there was hypopyon. Another prolonged attempt to extract the foreign body

* Reported at the meeting of the Chicago Ophthalmological Society, April 14, 1903.

with the giant magnet was made, but although the instrument was used in the various ways described by Haab, it was ineffectual, though at times the patient had severe pain as if the steel were being pulled by the magnet. Two days later, on February 5th, it was clear that the eye was lost, and enucleation was advised, but the patient and his wife did not consent to this until the next day, when the eye ball was removed.

The specimen shows the fragment of steel firmly imbedded in exudate in the posterior part of the vitreous chamber.

The case is interesting in that the small piece of steel passed completely through the lid before entering the eye ball, and also by reason of the fact that the inflammatory exudate held it so firmly that it could not be drawn forward by the powerful magnet.

INCISED WOUND OF THE CORNEA MADE BY A FRAGMENT OF SPECTACLE LENS.

BY S. MITCHELL, M. D.,
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Those who practice ophtholmology have doubtless many times commented upon the infrequency of really serious wounds to the eye from having a fragment of a broken spectacle lens penetrate any part of the eye-ball of the wearer. When we consider the vast multitude of people who wear spectacles, this infrequence seems all the more remarkable. The immunity of spectacle wearers from accidents of this sort is due, no doubt, to the fact that the first effect of the blow, which shatters the correcting lens, is to dislodge the frame or mountings from the nose of the wearer. Thus if any part of their anatomy is injured by the sharp fragments of glass, it is not the eye-ball, but preferably the cheek, or brow, or the inner side of the bridge of the nose.

I have never met with but one case of penetrating wound of the globe, where the instrument of destruction was a fragment of the victims own correcting lens. This occurred in the person of a married lady, about thirty years of age. She was a myope, of whose history I knew absolutely nothing previous to her coming to consult me on account of the accident, the particulars of which I shall presently relate.

She was wearing a pair of —5.50 spherical rimless lenses in riding bow mountings, when she first came to my office, the same pair she was wearing at the time of the accident, except that the left lens,

which was broken at the time of the accident, had been replaced by an optician.

The date of the first visit was September 26th, 1902, two days after the receipt of the injury, which occurred as follows: While breaking some kindling wood with an axe, a piece of the wood was projected against the left spectacle lens, breaking the lens into two pieces, one fragment of which produced the injury to the cornea of the right eye. The wound was about 7 or 8 millimeters long, through the entire thickness of the cornea, and extended diagonally across the exact center of the apex of the cornea, upward and outward, and was as clean cut as though made by a sharp knife. The anterior chamber being empty, the iris was lying in close contact with Descement's membrane, although no part of it had become incarcerated in the wound. All movements of the eyelids, that produced any pressure upon the eye-ball, caused slight gaping of the wound. This condition undoubtedly played a very important part in preventing a timely healing of the wound. There was very little ciliary congestion. Pain and photophobia were not complained of at all. Tension was very much reduced and vision amounted to the counting of fingers at thirty inches. A mild solution of atropine was instilled in the eye every four hours and a bandage applied. This treatment was followed for two weeks, without any visible change in the condition of the eye.

At this time she was induced to enter St. James Hospital, where for ten days she was kept in bed with both eyes bandaged, thus favoring immobility of the eyes, and a freedom from the nipping of the eye-ball by the lids, which produced a gaping of the wound. The result of this procedure was disappointing and three weeks later, when she left the hospital, the wound had apparently made no progress towards healing. She remained at home for several weeks, all the time keeping the eye covered with a shield and pad of cotton, and coming occasionally to my office for treatment.

On November 20th she was suddenly seized with violent pain in the eye and right side of the head, accompanied by nausea and vomiting. I saw her about two hours after this attack. The eye was very much congested, and the conjunctiva somewhat chemotic. Tension was + 3. Vision amounted to L. P. only. I advised the immediate performing of an iridectomy. This proposition was not accepted until four days had elapsed. Meanwhile a 1 gr. solution of eserine was prescribed, one drop being instilled every half hour for the first twenty-four hours and then at varying intervals for some time afterward.

On November 24th she was sent to the hospital, and on the same day placed under chloroform anesthesia and a good free upward iridectomy performed. The iris was found to be adherent to the cornea along the whole track of the wound. After the completion of the iridectomy, a moderately broad spatula was passed into the anterior chamber and all these adhesions thoroughly broken up.

The eserine solution was instilled into the eye twice a day for a week or ten days following the operation. The eye made a rapid and uneventful recovery. Pain and tension was relieved immediately, and on the second day after the operation vision had returned to about the same acuity as previous to the attack of glaucoma, viz.: ability to count fingers at thirty inches. Five months have now elapsed since the operation for iridectomy was performed. A few days ago I had an opportunity to examine the eye and found it in a perfectly normal condition. There is a slight improvement in vision.

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REPORTS OF SOCIETIES.

ABSTRACT REPORT OF THE SECTION ON OPHTHALMOLOGY, AMERICAN MEDICAL ASSOCIATION, NEW ORLEANS, LA., MAY 5, 1903.

The meeting was called to order by the president, Dr. John E. Weeks, of New York.

Address of the Chairman, Dr. John E. Weeks, New York.

Dr. Weeks said that the by-laws of the Association defined the character and limits of the Chairman's address to remarks on "recent advances in the branches belonging to the section, including suggestions in regard to improvement or methods of work," but that he would digress sufficiently to welcome the members to this session and to offer thanks for the splendid manner in which they had supported the officers in their endeavor to present a program of valuable papers.

Some years ago Dr. Casey A. Wood started the idea of having a distinguished ophthalmologist attend the sessions of the section by inviting one from Paris though at the last moment word was received that the gentleman could not attend. Last year the Chairman, Dr. Frank Allport, of Chicago, had given the section the privilege of meeting Professor Haab, of Zurich, Switzerland, and the precedent established by his predecessors was one that he thought should be continued. He had endeavored to emulate the example set, with results similar to those of Dr. Wood.

He believed the Section on Ophthalmology to be the representative body of ophthalmologists in the United States; that its membership was wider than that of any other society. As a part of a great association it had collateral support and was founded upon a constitution and governed by by-laws sufficiently broad and liberal to permit of indefinite expansion. He considered that the method of officering the section provided against the danger of the domination of cliques and of the continuation of officers through courtesy or

otherwise that might endanger its activity. He thought the possibilities of the section were great and that all should endeavor to cause these possibilities to be realized by lending their influence to the production of work of the highest order. The inducements to become identified with the section were greater than those offered by any other association of ophthalmologists in this country, some of them being contact with representative colleagues from all parts of the United States; the assurance of large attendance; the publication of accepted papers and the discussions in a journal having a larger circulation than any other medical paper in the United States, as well as the publication of the papers and discussions in a bound volume at a nominal cost.

He thought it scarcely necessary to mention the recent advances in ophthalmology as they would be presented in better form and more in extenso by the members. Some lines of research that promised much could be mentioned; as the effect of the x-ray and of the Finsen ray on neoplasms, detached retina, deep inflammatory processes and suppurative processes. The study of the bacteriology of the eye had not yet been exhausted. There were still some acute processes of apparently bacteriological origin, as Parinaud's conjunctivitis, trachoma and some of the suppurative diseases of the cornea. The question of the value of subconjunctival, intra-orbital and intra-bulbar injections too were as yet in a chaotic state. An exhaustive paper on orbital neoplasms embracing a careful study of modern methods would be heartily welcomed by all ophthalmologists.

Vernal Conjunctivitis.—Dr. Wm. Campbell Posey, Philadelphia. The essayist outlined the history of the generally accepted picture of the disease known as Vernal Conjunctivitis and of the differential diagnosis and spoke of the frequency, physical characteristics, and distribution in the United States, based on answers to circular letters to ophthalmic surgeons in all parts of the country and gave his observations regarding the pathology, etiology and treatment.

Discussion.—Dr. John E. Weeks, New York: The disease was one that had interested him a great deal and to which he had given much study. It was his observation that the cases occurred among the well-to-do in a proportionately larger percentage than in those whose hygienic surroundings were less favorable. A striking feature of the disease he thought was the variability in the length of time during which it persists. There seemed to be no particular predisposition, the disease occurring equally as often in the robust as in those of poor nutrition. He had been able as yet to find no proof of con-

tagion, though he had observed it affecting several children in the same family. It differed from trachoma in that the retro-tarsal fold never presented vegetations. In the treatment he had found mild measures to serve best—bathing the eyes with a warm solution of boracic acid, 1 to 1½ per cent, twice a day and the use of the yellow oxide ointment once daily. He considered that the use of cocaine was not beneficial.

Dr. Henry Dickson Bruns, New Orleans: Called attention to the relation of the disease to phlyctenular ophthalmia and referred to the frequency of that disease in the negro race. He believed the phlyctenular ring appearing around the cornea was a phlyctenular phenomenon.

Dr. Henry Gradle, Chicago: Considered the changes of a progressive nature increasing from year to year, a history dating back more than one year being sufficient to establish a diagnosis. The disease resembled in some respects hay fever, though he had not seen hay fever existing with the disease. As a rule the retro-tarsal folds were not involved, but there were exceptions. The cornea was invariably exempt. He had obtained the best results with adrenalin.

Dr. Zentmayer, Philadelphia, corroborated the observations of Dr. Posey regarding the classification. He regarded the clinical picture as a racial type of phlyctenular conjunctivitis.

Dr. Baker, Cleveland, Ohio, had never made a diagnosis of vernal catarrh. Unless phlyctenular conjunctivitis were called "vernal catarrh" he did not consider that the disease existed in his locality.

Dr. Hiram Woods, Baltimore, thought the type of the disease seen in Baltimore corresponded with that described by Dr. Bruns. He had seen only two cases with corneal complications. There was no pain or photophobia, but the typical annular ring.

Dr. Stevenson, Akron, Ohio, spoke of the recent observation that passing a glass or metallic rod over the conjunctiva produced itching in the one case or painful sensation in the other as an aid in differentiating between trachoma and vernal catarrh. He referred to the use of the x-ray in the treatment, Smith and Warren having claimed considerable benefit from its employment.

Dr. Stricker, Cincinnati, considered that when the ocular conjunctiva was involved the disease was one of phlyctenular conjunctivitis. He did not believe there was a vernal catarrh of the ocular conjunctiva.

Dr. H. Gifford, Omaha, considered ocular vernal conjunctivitis and phlyctenular conjunctivitis as distinct diseases. He had seen

the disease in perfectly characteristic form in two negroes. He considered the one sided cases as having had the disease in both eyes originally with a return in the one eye.

Dr. J. H. Claiborne, New York, desired to place himself upon the side of those having seen vernal catarrh. He had not seen the disease in the negro, though at one time living in the south. He had the best results from the use of nitrate of silver and atropin.

Dr. R. L. Randolph, Baltimore, thought about five years ago he had discovered a specific in the salicylic acid ointment, but later had not had such good results with it. It seemed to be of most benefit in the treatment of the ocular vernal catarrh, less in the palpebral form.

Dr. Morrow, Canton.—The salicylic acid ointment, spoken of by Dr. Randolph, had given him the best results, the strength used being five or ten grains to the dram.

Subtropical Trachoma.—Dr. Rufin A. Wright, Mobile, Ala.—The writer considered trachoma chiefly in its clinical aspect, basing his consideration of the disease upon the following hypotheses: that it is a distinct disease characterized by a granular and hypertrophic condition of the palpebral conjunctiva and its transition folds; it tends to progress in a fixed manner, varying only in degree; certain complications and sequellæ mark its course; it is contagious and a distinct disease from follicular conjunctivitis; it is capable of being modified by proper treatment. He was of the opinion that the type of the disease in the south was milder in form and less frequent in serious complications. As to racial immunity his experience had been negative. He had never seen a case of true trachoma in the negro. The state boards of health had not inaugurated any system of inspection or exclusion of cases from the schools. He advocated the use of a recent remedy, copper citrate, claiming for it: that it produces absorption of the granulations; that it is less irritating and readily used at home, in the form of an ointment of 3 to 10 per cent in white vaseline.

Discussion.—Dr. Dunn, Cairo, Ill., thought the treatment might be divided in that used before the appearance of the granulations and that used after. He thought the disease might be aborted early by germicidal remedies. After the appearanc of the granulations nothing compared with the use of the roller forceps.

Dr. A. O. Pfingst, Louisville, thought there was considerable misconception as to the nature of genuine trachoma and that many of the cases so called were not trachoma. He congratulated the author

of the paper upon his success with the new remedy, but thought the number of cases so treated too small to base definite conclusions upon.

Dr. H. Gifford, Omaha, spoke of the difficulty of securing the drug. The few cases in which he had tried it were in line with the results obtained by Dr. Wright.

Dr. Harlan, Baltimore, reported the case of three Russians detained in Baltimore for trachoma, in which the symptoms subsided and disappeared entirely after an attack of measles; the father, who had had measles before, having to undergo a protracted course of treatment.

Dr. Ledbetter, Birmingham, was of the opinion that the trachoma of the south did not differ from the disease elsewhere.

Experimental Study on Some Methods of Combating Postoperative Infection of the Anterior Segment of the Globe.—Dr. E. C. Ellett, Memphis, Tenn.—The writer referred to the experiments of Ostwalt in introducing iodoform into the anterior chamber of the rabbit's eye and later injecting a culture of the staphylococcus, by which purulent inflammation was prevented, and to Romer's report of its use in three cases. The author carried out a series of seven experiments along these lines, using iodoform rods made with gelatine, containing 50 per cent iodoform, and came to the following conclusions: Iodoform used in three cases of streptococcus infection; one failure, two successes. In two cases of staphylococcus infection; two successes. He also referred to one clinical case, cataract followed by infection, in which the iodoform was introduced in the form of powder, no cones being available; result being failure. Method: Peripheral incision made in cornea, the rod caught at one end with forceps and pushed into the chamber completely. The author concludes that the method has a field of usefulness, with no possibility of harm. Must be used early, certainly not later than the second day.

Discussion.—Dr. Edw. A. Shumway, Philadelphia, thought the best way of introducing the iodoform was by means of these rods and that the best results might perhaps be secured by cauterizing the wound and then introducing them. It was not possible to keep the powdered drug from being washed away, out of the anterior chamber. He thought it of great importance to first evacuate the opaque lens center and to use vigorous internal medication, salicylate of sodium in large doses having proved of great value.

Dr. Frank Allport, Chicago, had experienced great difficulty in securing the discs or rods. He had used some left him by Dr. Haab

last year, but had been unable to have them properly made. One difficulty was to make the rods aseptic. Efforts to sterilize them resulted in making them difficult to handle. He had used them a number of times and obtained good results.

Dr. G. E. de Schweinitz, Philadelphia.—The sterilization of the iodoform, which, of course, was not a sterile product, could be accomplished by washing the powder in sterile solutions of bichloride of mercury. He spoke of the pain, severe in character on the night following the introduction of the rods, necessitating the use of hypodermics of morphia.

Dr. J. H. Claiborne, New York, referred to some experiments which Dr. Colburn and himself were carrying out with the use of formaline. They had experimented upon rabbits, using formaline 1 to 5,000. One injected in the capsule of Tenon recovered; one with injection into vitreous went straight to destruction. In order to secure a very virulent growth of the streptococci they passed it through a second growth. With injections of this growth the eyes went to rapid destruction. He thought if any light could be thrown upon the subject it was greatly to be commended.

Dr. A. B. Hale, Chicago, thought the use of the cautery with the introduction of the iodoform would be contraindicated, as it would not tend to the preservation of the eyeball. He was not convinced that much had been accomplished practically when the eyeball had been saved but without vision. It was a successful surgical procedure, but of little benefit to the patient.

Ocular Complications of Bright's Disease.—Dr. Louis Stricker, Cincinnati.—Dr. Stricker thought the eyes became involved as a result of the general systemic conditions of Bright's Disease, which conditions were the result of faulty kidney excretion, leading to retention of urea and other excrementitious substances in the blood, which substances are either poisons or lead to the formation of toxins, producing degenerative changes in the vessels. In the eye it was the vascular system, the chorioidal and retinal vessels and its nervous expansion, the optic nerve and retina most frequently involved. The hemorrhages were due to the combined influence of arterial degeneration and increased arterial pressure. Of sixteen cases, five were optic neuritis; three neuro-retinitis; two neuro-retinitis hemorrhagica; two of neuro-retinitis and chorioiditis; one venous thrombosis; two uremic amaurosis; one keratitis, in all probability a general uveitis. The writer concludes that the ocular complications of Bright's should lead to systemic examination; that the idea that

one must find the characteristic picture is a mistake; only a small percentage of cases develop ocular symptoms, but if larger number of cases were examined more would be found to have ocular lesions; the complications are the result of altered nutrition, or toxemia, and chronic uremia; that disease of the eye coming on in the course of Bright's is of the gravest import; in acute Bright's the condition is of a more hopeful character; estimate of the urea quantity is the barometer; in the Bright's of pregnancy with ocular complications a low urea quantity should be the sign for immediate interference; that excrementitious substances retained are responsible for the inflammatory changes.

Albuminuric Retinitis and Decapsulation of the Kidney.—Dr. Geo. F. Suker, Chicago.—The object of the paper was to elicit the interest of the members in determining whether or not decapsulation could be accepted as a curative measure for the intra-ocular complications. The conclusions to be drawn from the operations were not encouraging. The death rate for nephritis with fundus complications is very high. The writer concludes that the operation so far offers no hope in cases of bilateral interstitial nephritis with retinal complications; that any improvement in the eye ground is temporary; that the operation may be of service in unilateral nephritis with fundus lesions; that the mortality rate for albuminuric retinitis has not been lessened by the operation; the retinal complications are an index to the severity of the kidney involvment; in nearly all cases of chronic nephritis cardiac involvement is present; as yet the medical treatment yields as good results as the operative.

Discussion.—Dr. Henry Bruns, New Orleans, agreed with Dr. Stricker that the proportion of urea excreted is of greater significance than the presence of albumin. He thought the general practitioner somewhat slow in recognizing this fact and making use of it. That whether the urea is the offending agent or not we can not say positively, but when there is a lessened excretion of this element the patient suffers.

Dr. Greenwood, Boston, thought the cases should be considered from the standpoint of arterial degeneration rather than from the standpoint of kidney disease.

Dr. L. Connor, Detroit.—It was interesting that in the most specialized branch of the profession we should have papers essentially discussing general disease; that it was significant of the progress of the times. He referred to the importance of considering the personal

equation of the patients themselves. What these toxic products are had not as yet been worked out.

Dr. Edward Jackson, Denver.—There could be no question of agreement with Dr. Stricker that albumin is not the factor, but that defective elimination of urea is much more important. The ocular lesions depended upon the condition of the general vascular system. He had never seen a typical case without involvement of the vessels generally.

Dr. G. E. de Schweinitz, Philadelphia, believed there were two varieties: one depending upon toxic influences, whatever they may be; and the other not a complication of nephritis, but of degeneration of the vascular system. There were types, however, of retinal lesions associated with diffuse nephritis when the vessels throughout the general system were not yet in a state of degeneration.

Dr. Griffin, Ann Arbor, reported a case occurring in a patient whose only symptom was reduced vision and who died in six months after the examination.

The Physiology of the Sympathetic in Relation to the Eye.—Dr. Geo. E. de Schweinitz, Philadelphia.—The paper gave a brief resume of the general anatomy and physiology of the sympathetic; its distribution in the eye; to the iris and ciliary body; to the eyelids and to Muller's muscle. He considered its relation to the lachrymal secretion; its influence on the movements of the iris, with special reference to the mydriatic tract of the pupil and also a consideration of the ciliary-spinal center. He considered the nature of the ciliary ganglion, with special reference to its relation to the sympathetic system and of the effects on the eye of lesions of this ganglion; the relation of the sympathetic to the mechanism of accommodation; the relation to intra-ocular tension; the ocular phenomena which follow galvanism of the sympathetic in the neck. He referred at length to the experimental exophthalmos and enophthalmos and "ptosis sympathetica" and the ocular phenomena which follow injury to the sympathetic in the neck, section of the sympathetic cords or extirpation of the cervical ganglia; the effects of drugs and toxic agents. He said that although lachrymal secretion may be caused by excision of the sympathetic, or removal of the ganglion, the sympathetic itself should not be considered the nerve of secretion for the lachrymal gland. He also spoke of the effects of drugs and toxic agents and concluded with remarks on the relation to the eye deduced from operations on the sympathetic cord in the neck or its ganglia in glaucoma, epilepsy, and exophthalmic goitre.

The Influence of Resection of the Superior Ganglion of the Cervical Sympathetic in Glaucoma.—Dr. Wm. H. Wilder, Chicago.—Dr. Wilder reviewed the history of the operation and reported cases of sympathectomy in various forms of glaucoma and considered its immediate and ultimate effect on vision, tension of the eye, pupil, visual fields, etc. He considered also the accidents and complications as a result of the operation and referred to the experiences of various ophthalmologists and their impressions of its utility in glaucoma. He concluded that the operation is not one to be considered of unusual danger and it should show a trifling mortality; that it was not an operation to be condemned too hastily; that it should be given an early trial where it is applicable; that the simple glaucoma chronica is the one most suited and next the hemorrhagic form.

Influence of Resection of the Cervical Sympathetic in Optic Nerve Atrophy, Hydrophthalmos and Exophthalmic Goitre.—Dr. James Moores Ball, St. Louis.—The writer detailed the history of sympathetectomy for optic nerve atrophy, reporting his own cases with the method. Few cases of hydrophthalmos had been treated by operation on the cervical sympathetic and the method seemed valueless. He considered excision of the cervical sympathetic was worthy of trial in those cases of simple atrophy which resist measures less heroic. It was impossible as yet to say whether or not bilateral operation was advisable in unilateral atrophy. The value of the method in hydrophthalmos has not been demonstrated. In exophthalmic goitre excision of the ganglion is followed by a larger percentage of cures than is any other proceeding.

Pathology of the Cervical Sympathetic.—Dr. Jno. E. Weeks, New York.—The essayist considered the appearance of the normal ganglia as compared with the appearance of the ganglia removed in cases of glaucoma. In the latter there was excess of pigment in the ganglion cells; the cells were not round, and even appeared shrunken; there were excentric nuclei, with occasionally only the nucleolus visible; the cells were at times vaculated and there were "mast" cells; evidences of degeneration. The author further referred to the methods employed in the examination of the tissue.

Discussion.—Dr. Melville Black, Denver, believed that it could be concluded, from the statistics presented, that the operation was one of value. The operation, however, should not be tried as a last resort, but a first one, in the proper cases. He had some doubts as to the permanency of the results.

Dr. Freeman, Denver, said that one of the surgeons of that city

had operated on ten cases, removing both the superior and middle ganglia, with no undesirable results following the proceeding, with the exception that sometimes a neuralgia resulted. He considered the operation one of value.

Dr. G. C. Savage, Nashville, believed that the sympathetic nervous system is the power that nature has given for the correction of astigmatism. This power to correct a portion of the astigmatism, which certainly existed in every eye, was not in Muller's muscle, nor in the third nerve, but in the sympathetic system.

Dr. Geo. F. Suker, Chicago, thought the consideration of the physiology of the sympathetic system in relation to glaucoma exceedingly interesting; the exact physiological tract of the fibers was not yet known; if you excised the ciliary ganglia as well as the superior there would still be some sympathetic reaction, from the rami communicantes coming down through the fifth nerve. There might be restitution through the crossing of the fibers, which might explain why some of the action is restored. From being very enthusiastic some years ago he had become quite conservative.

Dr. Edward Jackson, Denver, thought we were not yet in a position to speak definitely as to the utility of the operation in glaucoma. He thought, with Dr. Black, that excision did most in the cases favorably influenced by eserine; it will do good in cases that would be benefited by iridectomy. It was of value in cases where one eye had been lost and it was difficult to get a patient's consent to operation upon the other eye. Where the patient will not submit to iridectomy though indicated, sympathectomy may be expected to be useful.

Dr. de Schweinitz, Philadelphia, said it had been impossible to read in detail the experiments upon which his conclusions had been based; he had not attempted to go into the question of the pupil-dilating fibers which do not run in the sympathetic; a great many of these fibers do not run in the sympathetic at all, but in the trigeminal. He believed, with Dr. Suker, that it would not be right to excise the middle ganglia. He did not believe it was those cases in which eserine did good that the operation was of most value, because eserine does good where the filtration angle is closed, while sympathectomy has done good in the cases where there has been doubt as to whether the angle was blocked.

Dr. Wilder, Chicago, said the ganglia excised did not show any increase in connective tissue, but increase in the adventitious tissue could be seen in the coats of the vessels. He thought there

was doubt sometimes as to whether we should resort to sympathectomy first or iridectomy first in the cases of simple glaucoma; he was skeptical of the value of iridectomy in true simple glaucoma, where the anterior chamber was of normal depth; and it was in such cases that sympathectomy did good.

Dr. Ball, St. Louis, said that in the examinations made of the ganglia excised for exophthalmic goitre the same pathological changes had been found.

Retinal Disease Limited to the Region of the Macula Lutea.—Dr. Henry Gradle, Chicago.—This paper gave a description of various types of retinal disease sharply limited to the region of the fovea or that adjoining it. The reduced central vision corresponded to a well defined, but easily overlooked, lesion. The paper included the report of five cases.

Discussion.—Dr. W. L. Dayton, Lincoln, Neb., said the first two or three cases simulated the changes that might occur in senilla; that such changes did occur in the pigment and nervous epithelium of the retina in senile cases. The condition should also be carefully studied in reference to traumatisms. Such changes might also be seen as the result of the electric light.

Dr. L. Connor, Detroit, had observed a somewhat similar case in a physician of forty.

Dr. Hawley, Chicago, was reminded of three cases of a similar nature, which he reported, and referred to the influence of autointoxication from the intestinal tract as a factor in the trouble.

Dr. Casey Wood, Chicago, chairman of the committee on Pathological Exhibit, made a few remarks on the *various methods of preparing and preserving ophthalmic specimens for the museum,* saying in part, that back in the seventies these preparations were preserved almost entirely in alcohol, which so contracted it that the proper relations of the parts were destroyed. Later it became the custom to make celloidon preparations. Then Priestly Smith, of Birmingham, had introduced the method of putting them up in gelatin. To this method there was the objection made by the pathologists that no sections could then be made. He considered the gelatin method, if one used great care, the best for the large specimens. Fluids, generally formalin, were used where one desired to be able to take sections. The most beautiful method of preserving the specimen in fluid was that of Greef, where in a formalin solution the specimen is adherent to the jar. Dr. E. V. L. Brown, pathologist of Illinois Eye and Ear Infirmary, had contributed a large num-

ber of specimens after the Greef method, and had also made small photographs of the specimens which were attached to the jars.

Skiascopy as a Method of Precision.—Dr. Edw. Jackson, Denver. —The writer said the first step toward rendering skiascopy a method of precision was shortening the distance between the patient and the examiner. He deprecated the method of practicing skiascopy at a distance of a meter; it could not be exact; the correctness of measurements made at that distance could not be relied upon. He advocated working at a quarter of a meter and for this distance the source of light must be reduced to 2.5 mm. or less; there must also be a reduction in the size of the sight hole, which should not be more than one-half the diameter of the source of light. The correctness of measurements made at this distance depended upon precision and exactness in instruments and methods. Exact skiascopy meant working at a distance of a quarter or a half meter; the accurate measurement of that distance; the adoption of the source of light and the sight hole to the distance; and, care to bring the source of light close to the conjugate focus of the retina.

Discussion.—Dr. Griffin, Ann Arbor, considered that subjective tests were very unreliable and there was great necessity for some exact method that we might not have to depend upon the patient's judgment. The method should be followed in all its details in order to get the desired results. He was somewhat surprised at Dr. Jackson's view that accurate results could not be obtained at one meter, and believed himself that at that distance one could diagnose within a quarter or even an eighth diopter.

Dr. Gifford, Omaha, thought we should speak of the visual area, and not "zone."

Dr. Wilder, Chicago, thought that while the method was very exact it was in most cases an unnecessary refinement. He felt satisfied when within a quarter diopter of the actual truth; it was close enough for practical purposes. He thought it increased the difficulties without proportionately increasing the good results obtained.

Dr. Hawley, Chicago, considered the method very scientific, but hardly necessary for practical work. Most ophthalmologists used a distance of one meter. He spoke of the necessity for the examiner to correct his own error of refraction, especially if presbyopic.

Some Points in the Pathology of Neoplasms of the Conjunctiva, Illustrated by the Present Exhibit of Morbid Growths.—Dr. Edw. A. Shumway, Philadelphia.—The author gave a resume of our knowledge of tumors of the conjunctiva and exhibited stereopticon illus-

trations showing the various growths which are found on this membrane. He considered the growths on the conjunctiva of great interest pathologically because of their great variety, although they were, relatively speaking, infrequent. He showed illustrations of carcinoma, sarcoma, and of the benign growths, specimens of dermoid tumor, lipoma, cystoma, lymphangioma, telangiectasis, fibroma, granuloma, papiloma, adenoma, hæmangioma, etc.

Dr. Casey A. Wood, Chicago, gave a lantern exhibition and talk, showing the comparative appearance of the fundi of various of the lower animals, including the bat, duck, skunk, snake, chimpanzee, Nubian negro, rabbit, sheep, goat, etc. He called attention to the close resemblance of the fundus of the chimpanzee and the Nubian.

The Bacteria Concerned in the Production of Eye Inflammations.—Dr. Robert L. Randolph, Baltimore.—Dr. Randolph spoke of the occurrence, cultural properties and morphology of the bacteria concerned in the production of the eye inflammations, illustrating his talk with lantern slides. He said, among other things, that we had not yet found any bacteria that were pathogenic only for the eye. That the possibility of their being such bacteria was suggested by such diseases as sympathetic ophthalmia, and trachoma. He was timetimes tempted to think that the bacteria so often found in the normal conjunctival sac performed important functions in the life of the normal conjunctiva and should not be destroyed. He thought that with increasing knowledge of the subject we would be compelled to take a different position and perhaps to regard some of the bacteria, at least, as benefactors.

Bacteria in the Conjunctiva, Cornea, Iris, Ciliary Body and Chorioid, and Changes Caused Thereby (illustrated by projection with a lantern of sections and lantern slides).—Dr. Brown Pusey, Chicago.—This was a lantern lecture in which many sections were shown and the interesting and instructive features pointed out; especially, pertaining to the bacteriology of the conjunctiva, cornea, iris, ciliary body and chorioid, and the pathological changes resulting from the invasion of bacteria. He also showed specimens of the Weeks' bacillus, diphtheria bacillus, gonococcus, strepticoccus; typical bacilli in the tissues. The author said we were handicapped by the fact that many of the organisms that produce conjunctivitis in man do not lend themselves to experimentation in animals; such being the case with the Weeks' bacillus and that of Morax-Axenfeld.

The Essentials and Unessentials of Ophthalmic Asepsis.—Dr. Harold Gifford, Omaha.—This paper briefly discussed the bacteriology

of the conjunctiva, edges of the lids and eye lashes and gave the results of experiments in disinfecting the same. The writer thought a certain share of the precautions taken by the general surgeon could be dispensed with for the ophthalmic operator. The preparation of the conjunctiva should be conspicuous for its simplicity; simple irrigation with sterilized normal salt solution or boracic acid solution. He deprecated the use of the preparatory bandage, as increasing the number of germs in the normal sac. The best application was one of the shields composed of an arch of some firm material. Instruments should be boiled 8 to 10 minutes in a closed vessel; the collaria should be sterilized at each operation. He thought that for the oculist no preparation of the hands beyond a good scrubbing with sterile soap and water and careful drying on a sterile towel was necessary.

Discussion.—Dr. Casey Wood, Chicago, advocated the method of tying off the canaliculi by simple suture in cases of infective dacryocystitis where the eyeball was to be opened, filling up the sac and canaliculi with argyrol prior to tying the suture.

Dr. Dudley, Easton, called attention to the great value of making bacteriological examinations of the conjunctival secretion as a routine practice in the office.

Dr. Pfingst, Louisville, thought the ophthalmic surgeon should prepare for operation just as the general surgeon. He did not believe that boiling the instruments dulled the edges as much as was generally supposed; it was the operation that dulled them.

Dr. Baker, Cleveland, said it had been his custom for a long time to place his instruments in boiling water; he did not boil his knife long and while waiting wiped the knife with bits of sterile cotton held in the forceps in the boiling water.

Dr. Ellett, Memphis, referred to a method he had recently used to prevent infection in a cataract extraction, where there was an incurable conjunctivitis. Previous to the extraction he incised the conjunctiva and dissected it up from the eyeball all around the cornea; he then picked up the edges of the conjunctiva and bringing them up over the cornea, sutured them there, after having extracted the lens. The sutures were removed on the fourth day, when the corneal wound was healed and the conjunctiva slipped back to its natural position. Patient got vision of 20/30 without needling operation.

Dr. Parker, Detroit, had operated on one case after the method employed by Dr. Ellett with good result and vision of 20/40.

Dr. Claiborne, New York, called attention to the fact that the health and vitality of the patient had a great deal to do with the

matter of healing of the corneal wound, citing a case of non-closure for a long time, although there was no infection.

Dr. Gifford, Omaha, said that a number of years ago de Wecker had recommended the covering in of the corneal wound in these cases with membrane and the use of a flap from above had been recommended. For several years he had been using the flap method.

Development of the Fusion Center in the Treatment of Strabismus.—Dr. Nelson M. Black, Milwaukee.—The writer designated the fusion center as the dominant center of the visual apparatus and said that from it must emanate all the impulses to the various subsidiary centers for all changes in the accommodation, position of the visual axes and position of the head and body that are required to bring corresponding retinal points into focus. Any disturbance or condition of non-development of this center is the cause of those heterophorias or heterotropias not due to abnormalities in the anatomic relation of the orbit and extrinsic muscles or their paralyses. He considered the various causes of the non-development of this fusion center. The method of developing its function with the amblyscope during the existence of strabismus. He considered that if treatment did not result in parallelism of the visual axes and operation had to be resorted to the fusion center, being in a developed condition, could better proceed with its function as soon as the visual axes were made parallel.

A Set of Charts for Stereoscope to Be Used for an Amblyopic Eye or for Treatment of Squint.—Dr. A. B. Hale, Chicago.

Discussion.—Dr. Savage, Nashville, did not believe in the existence of a fusion center, but in volitional centers controling the recti and oblique muscles, and basil, or reflex centers, all being under the control of the fusion faculty.

Dr. Casey Wood, Chicago, said that binocular single vision is a thing that every child has to acquire; he doesn't possess it at birth. He strongly advocated the use of the Worth instrument for exercising the children. He used practically only three pictures, one of which was the bird and cage, which the child would always recognize. The child should be exercised three or four times a day with the stereoscope at home and at least three times a week in the office.

Dr. Jackson, Denver, called attention to the advantages of the fusion tubes suggested by Priestly Smith, and thought the child would be easily induced to keep up the use of that instrument, more so than with the pictures.

Dr. Stevenson, Akron, had found the Worth instrument of great

service in the cases of squint. He thought the term "fusion faculty" preferable to that of "fusion center" and that it was the principle factor in binocular vision.

Cramp of the Ciliary Muscle due to Eye-strain.—Dr. J. W. Wright, Columbus, O.—The author referred to cramp in other parts, as in the fingers and hands of telegraphers, pianists, typewriters, etc., due to prolonged contraction of certain muscles, and said that similar conditions occurred in the muscles of accommodation; that it occurred in emmetropia as well as in refractive errors. He spoke of the frequency of this cramp and considered that the etiology was particularly enforced near work; ametropia, especially hypermetropia and astigmatism. He referred to the differential diagnosis between this cramp and hypertrophy of the ciliary muscle. As to treatment he thought that cycloplegics were of only transient value and should be supplemented by internal treatment. The writer had found gelsemium of considerable value in these cases.

Discussion.—Dr. Jackson, Denver, said, as to treatment, that the important consideration was the discovery and removal of the cause, which was generally uncorrected ametropia, or some over-use of the eye. Where that had been thoroughly attended to the condition generally cleared up very quickly.

Dr. J. A. Donovan, Butte, Mont., had found homatropin more or less unreliable in the treatment of these cases and preferred the use of the hydrobromate of hyocine.

Dr. Ryan, Galesburg, said that as Dr. Wright had made the statement that he was never able to get relaxation of the spasm by the use of the gelsemium alone he thought that would militate against its employment.

Some Observations on the Eye Complications of Smallpox During the Recent Epidemic in Cleveland.—Dr. A. R. Baker, Cleveland, O.—Dr. Baker exhibited a chart showing the character of the complications and referred to a number of cases in which loss of the eye resulted. The total number of cases occurring was 1,248, with 224 deaths, 17.9 per cent. The writer referred to the fact that one-third of all the cases of blindness in Europe, before Jenner introduced vaccination, were due to smallpox. The infection is carried into the eyes from the skin. The eye complications were greatly to be feared. As to treatment, no specific treatment had been found. Frquent washing of the eyes and the use of such antiseptics as were not harmful were indicated.

Discussion.—Dr. John Fulton, St. Paul, referred to the epidemic

in St. Paul, in which the eye complications were of a similar character to those reported by Dr. Baker, though, perhaps, not so acute. He thought it quite possible that it was the same eruption as that occurring on the skin.

Dr. Connor, Detroit, referred to the evil results that had followed the attempts to stamp out the disease by methods of disinfecting and ordinary cleanliness, without vaccination; a great trouble was that so many people of more than ordinary intelligence could not be made to see that they were not capable of judging concerning matter about which they had never studied. He thought that facts such as those brought out by the paper of Dr. Baker were great aids in making the people understand the necessity for vaccination.

Dr. Mann, Texarkana, had had six cases of corneal ulcer resulting from smallpox, in two of the cases the eyes being lost; treatment had no effect at all.

Dr. Donovan, Butte.—In an epidemic a few years ago the subject of whether or not the eye complications were the initial lesion was considered and in some cases it was decided that the eruption appeared on the eye at the same time as on the skin.

Dr. Miller, Los Angeles, thought the paper of Dr. Baker, presenting such interesting statistics would greatly aid in enabling physicians to bring the laity to a realization of the horrors of smallpox and the value of vaccination.

Dr. Morrow, Canton, referred to a case occurring in his practice where the corneal complication was undoubtedly the inoculation lesion; the patient had slept two weeks before with a cousin supposed to have chicken pox, but who had smallpox; seven days before the eruption he had the corneal lesion, showing itself first as a small distinct white spot.

Dr. Thompson, Indianapolis, had seen a number of eye complications in their recent epidemic; in the confluent form he had ten cases of corneal ulcer and lost four

Dr. Greenwood, Los Angeles, thought it reasonable to expect that Councilman's discovery would lead to its treatment by a serum and that it would be controlled as diphtheritic conjunctivitis had been.

Dr. Hilsher, Spokane, had had cases in which there appeared a conjunctivitis before the eruption came on, resembling a phlyctenular conjunctivitis.

Dr. Weeks, New York, thought the determination of the percentage of eye affections occurring in smallpox was of great inter-

est. It was also of interest to know that sometimes the eye was affected primarily, as he had supposed that in all cases the eye affection was a secondary one, due to the entrance of substances from the lids and brows together with an abrasion of the corneal epithelium. He thought the use of oily substances would help prevent the introduction of infection into the eyes.

Skin Grafting on the Eye Lids.—Dr. Oscar Dodd, Chicago.—The writer referred to the surgical principles involved and the conditions requiring the operation—as cicatrices, tumors, etc. He considered the objects to be obtained and the kind of grafts best suited to obtain good results. The advantages of the pedicle graft were the source of nourishment afforded and the firmness, but they were too heavy for the upper lid. The Wolfe grafts were uncertain in results, due to shrinking. The writer concluded that for the upper lid Thiersch grafts should always be used. That where there is dense cicatricial tissue the pedicle graft is most satisfactory. Should pedicle grafts not be available in such instances then the Thiersch graft could be used.

Entropion and the Operations Employed for its Relief.—Dr. John O. McReynolds, Dallas, Texas.—This paper discussed the nature of entropion, its causation and pathology, and gave a brief review of the various operations employed, with a modification of the principle ones.

Discussion.—Dr. Wilder, Chicago, concurred with Dr. Dodd as to his conclusions—that where you could get a pedicle graft there was better nourishment—and where there was a contracting scar the Thiersch grafts would shrink. As in the operation for entropion, there was no one operation that would meet all cases; a combination must be made.

Dr. Hawley, Chicago, preferred the use of the Thiersch graft whenever possible.

Dr. Todd, Minneapolis, referred to the importance of removing the muscular tissue from the under as well as the upper surface of the tarsal cartilage. He referred to the instrument introduced some time ago by Dr. Wilder for removing grafts from behind the ear or the palm of the hand. For controlling the hemorrhage he now used adrenalin with gratifying results.

Dr. Miller, Los Angeles, had also used adrenalin, but thought there was danger of secondary hemorrhage following its use. He sometimes had an assistant compress the temporal artery for this purpose.

Traumatic Lesions of the Ocular Adnexa, with Report of a Case of Contused Wound of the Eyebrow Resulting in Complete Monocular Blindness Unaccompanied by Ophthalmic Changes.—Dr. Ellet O. Sisson, Keokuk, Ia.—The author illustrated a number of cases of traumatic lesions of the eyebrows, orbital walls and soft parts. Wounds of the ciliary region were frequent. He considered the results of injury to the supraorbital nerves. Direct fracture of the superior wall of the orbit was liable to involve the optic nerve. One case was a severe cut over the eyebrow followed by total loss of vision, but within one month vision returned until the patient could see large objects about the room. There had been indirect fracture of the optical canal, resulting in injury to the optic nerve, followed by retrobulbar neuritis. Another case illustrated the result of injury to the soft parts and was rare in that there was either rupture of an ocular muscle, detachment of its tendon from its insertion into the sclera or an injury to a motor nerve, complicated with an injury to the terminal branches of the superior maxillary nerve with loss of sensation of the parts supplied. The writer referred to the necessity for a guarded prognosis in all cases; the value of asepsis and antisepsis in the treatment of all wounds located in this region.

Report of a Case of Complete Absence of Both Eyeballs at Birth.—Dr. Lawrence R. Ryan, Galesburg, Ill.—This was the report of a very unusual and remarkable case. Parents apparently healthy. Father aged fifty and mother thirty-five. Parents were first cousins. The writer considered that consanguinity might be an important factor in the causation. Aside from deformities the child was normal. The brain was unusually well developed, and up to the time of death, which occurred at three years, showed the ordinary progression of childhood.

Discussion.—Dr. Wood, Chicago, thought that there was really no such thing as true anophthalmos; the term was not a proper one; because if the case is thoroughly worked out some trace of the eyeball is found.

Dr. Ball, St. Louis, had reported a case occurring in a child that lived six months; lachrymal glands were large and secretion existed. The whole subject had been worked out by Von Hipple, who had collected data in something like eighty or ninety cases.

Dr. Claiborne, New York, had reported a case in New London two years ago of total anophthalmos. He thought Dr. Wood correct about the wrong use of the word "anophthalmos," but considered that we must have some term to express the condition.

Dr. Ayers, Cincinnati, had seen a few years ago a case of so-called total anophthalmos, in the line between the lids there being nothing visible but smooth mucous membrane, as though an enucleation had been done.

Exhibition of New Instruments.

Dr. Posey exhibited an apparatus devised for convenience in carrying bottles of collyria and for preparing compresses of heat or cold.

Dr. Suker exhibited an instrument to facilitate the demonstration of the fundus of the eye to students, so that three students at one time could observe the fundus.

Dr. Todd exhibited a tendon tucker which consisted in an improvement over the one presented by him last year.

Extraction of the Crystalline Lens in High Myopia.—Dr. H. V. Wurdemann and Nelson M. Black, Milwaukee, Wis.—The authors gave statistics of measurements of over 12,000 pair of lens and 8,021 eyes in which complete examination under cycloplegic was made, including 34 cases of high myopia. They considered the benefits derived from correction of full refraction in moderate and high myopia, generally full correction for distance and weaker concaves for near, in combination with full astigmatic correction. Where indicated prisms or operations on ocular muscles were resorted to. Six eyes operated on for high myopia were selected from the few cases in which correction of the refraction could not be tolerated and who were thereby incapacitated for the ordinary duties. All the operations were successful, patients receiving marked benefit and being able to pursue their vocations. The writers concluded that surgical treatment should be limited to cases over 12, OD, who suffer from inconvenience from correcting lenses. Ideal cases for operating were —17.0 to —18, OD. The operation was mainly indicated in young adults. Cases having active disease and changes in ocular structures, such as progressive myopia, chorioiditis, fluid vitreous, or detachment of the retina are not applicable. Dangers of operative interference was more than counterbalanced by results achieved; that is, increase of visual acuity, extent of visual field, etc.

The Management of Myopia.—Dr. J. H. Claiborne, New York.—The author's present views were based upon the paper of Förster. He approved as a rule (always under the age of presbyopia) total correction. Exceptions were rare, generally occurring in cases complicated by organic changes at the post pole. He thought that careful records should be kept so that the weight of voluminous statistics

may be brought forward as evidence. He referred to the rarity of myopic errors in this country as compared with hyperopic ones and considered the advisability of carefully examining the eyes of all children at regular periods, particularly at the age when myopia is apt to arise. He advocated the use of the student lamp and considered the Welsbach too white a light. There should be regular inspection of the schools and proper arrangement of the school room illumination. Desks should be so arranged that the children would not be induced to bend over. All myopia under the age of presbyopia was vicious and should be handled with much care. After presbyopia myopia had a tendency to decline rather than increase. The author favored total correction of myopia and varied from that practice only under exceptional conditions.

Discussion.—Dr. Jackson, Denver, thought that no hard and fast rule could be laid down as to whether cases were suitable for operation or not. Cases should be repeatedly seen and studied. He had found lenses of 18 and 20 per cent worn with comfort for years. The contraindications for operation could not be stated very definitely either. He emphasized the necessity for making a moderate discission; while it might entail waiting, it was much safer. If there is necessity for removing the lense as soon as possible it would be better to remove it without any discission.

Dr. Hale, Chicago, had had ten cases upon which he had operated and which had not been reported yet, in which the results had been very good.

Dr. Bruns, New Orleans, in 2,500 cases of refraction had operated seven times for the removal of the lens in myopia. He considered the great value to be the prophylactic one. He agreed with what had been said about the moderateness of the decision and considred that it held true of all decissions. A small discission should be made and then wait until the result is seen—until it is known how the eye tolerates it.

Dr. Fulton, St. Paul, had been so pleased with the results of discission that he did not see why linear extraction should be done.

Dr. Moulton, referred to the necessity of securing the co-operation of the parents in these cases of myopia, to have them provide the children with suitable conveniences for study.

Dr. Dodd, Chicago, had for the past few years given full correction in his myopic cases and found that they were much more comfortable and that the condition remained stationary, while in those not fully corrected the changes were much greater.

Dr. de Schweinitz, Philadelphia, desired to go on record, as he had often done before, as advocating full correction for these cases. He agreed with Dr. Jackson fully that full correction is the object to be attained for young persons with normal visual acuity and binocular near vision, no matter how high their myopia.

Calcareous Degeneration of Corneal Cicatrices.—Dr. H. Moulton, Ft. Smith, Ark.—The author considered certain rare types in which lime salts are deposited in old cicatrices in the form of plates or solid masses of considerable size. Two cases were related of adherent leucomata in which deposits were deeply situated and in which the symptoms were neuralgic and asthenopic respectively, and not such as a foreign body would usually excite. Perfecting and lasting relief was obtained by cutting into the cicatrices and removing the deposits.

The Voluntary and Involuntary Brain Centers Controlling the Ocular Muscles.—Dr. G. C. Savage, Nashville, Tenn.—The essayist considered that the nine volitional centers were each connected with two muscles, one muscle belonging to each of two eyes. That five of these centers control the recti and four obliques. A discharge of nerve impulse (neuricity) for a voliti center is equally divided between the two muscles under its control. If the tonicity of the one muscle equaled the tonicity of the other there would be an even, equal response on the part of both; but if unequal in tonicity, the basil center of the weaker muscle acts in order to produce harmony in movement. There were twelve basil, or reflex centers, each one of which is connected with one muscle only. That all these were under the control of the fusion faculty and were in no sense volitional. They discharged neuricity only under abnormal conditions, and only in the interest of binocular, single vision. These centers became exhausted in heteraphoria and excite the sympathy of other brain centers. Cure of heteraphoria brought rest to these reflex centers and relieved the symptoms caused by their excitation.

WILLS' HOSPITAL OPHTHALMIC SOCIETY.

A meeting of the Wills' Hospital Ophthalmic Society was held at the hospital on the 9th of March, 1903.

Dr. McCluney Radcliffe presented the history of a *case of sympathetic ophthalmitis from traumatism* in a twenty-six year old man in which the condition began as an optic neuritis. Microscopic examination of the enucleated irritating eye by Dr. Harold G. Goldberg,

the pathologist to the hospital, showed small round cell infiltration of all of the interior structures of the eyeball in association with dislocation of the lens and bands of lymph causing traction on the iris and the ciliary body.

Dr. Charles A. Oliver presented the history and showed a case in which eight years previously he had successfully removed a piece of steel from an iris with a magnet introduced through the original small wound made at the lower corneal-scleral junction, the iris at this late date remaining uninjured and freely mobile, and the pupil the same size as its fellow; in other words, there were not the least signs of any scar, mark, or disturbance indicative of either the past accidental or purposive traumatisms. Vision was normal.

Dr. Peter N. K. Schwenk mentioned an almost similar instance which had occurred in his practice some sixteen years ago. In his case the lens was also uninjured, and vision had always remained good. Dr. Samuel D. Risley stated that the vitreous body should not be injured during operative procedures in such cases. He preferred to make the puncture at the site of the entrance of the foreign body. He mentioned five cases, in three of which the lens was uninjured and vision became practically normal. In the remaining two the lens was injured. In one of these enucleation by reason of sympathetic irritation was made necessary in five months' time. The last case had not given any trouble. Dr. S. Lewis Ziegler made mention of a recent case of foreign body in the crystalline lens which was removed through the original opening without any reaction by the aid of a Hirschberg magnet—an instrument which, by attachment to a storage battery, he had learned to use some ten years ago. He believes that the giant magnet of Haab would be useful in many such cases.

In a brief discussion upon the value of *subconjunctival injections* Dr. Ziegler said that his experience had been limited largely to their use in detachment of the retina—in two cases of which the effects were rather pronounced. He preferred weak solutions, as one case in which he had used strong ones was followed by an orbital cellulitis, and another just escaped the formation of an abscess. He recalled a case in which vision in a somewhat limited field was temporarily increased from one two-hundredths to two-thirds of normal. Dr. Walter L. Pyle stated that as a result of reviewing the literature upon the subject, he had found that their use, especially in the stronger solutions and in uveal disease, was waning. Dr. Risley said that he never at the present time made use of strong solutions, as whenever

he had employed strong ones he had regretted them. He repeated them at tri-weekly (or even more frequent) intervals; offering in illustration cases of uveitis in young subjects in which the conditions were markedly ameliorated and vision arose to excellent degree of acuity. He had found that the results obtained by them in retinal detachment were never permanent. He had also found good results from their use in abscess of the cornea in which other forms of treatment did not have any apparent effect.

Dr. Arthur J. Bedell, the junior resident surgeon, showed for Dr. Oliver a case of *advancement of the external rectus muscle* in which Dr. Oliver had done his own form of operation; the result being remarkably good.

Dr. Ziegler exhibited a blind case of *recurrent iridocyclitis in which optico-ciliary neurotomy was successfully done for the removal of recurrent attacks of pain.*

Dr. Homer J. Rhoda, the senior resident surgeon, reported a case of *hypopion keratitis from traumatism* for Dr. Oliver. The patient had been struck with a piece of hard coal; the ulcer was central. The condition improved after the daily application of formalin, peroxide of hydrogen and iodoform, but the hypopion recurred some five or six times when the patient was allowed out of bed and when treatment was lessened. Almost immediately, however, upon the single application of the thermocautery the hypopion disappeared, and the eye made a rapid recovery with a resultant permanent vision of one-fourth of normal.

ABSTRACTS OF RECENT OPHTHALMIC LITERATURE.

BY E. A. SHUMWAY, M. D.,
PHILADELPHIA.

Concerning Cocaine.—E. Fuchs (*Wiener klin. Wochenschrift,* xiv., Jahrg., 1902, No. 38) warns against the widespread use of cocaine in the most diverse conditions of the eye, and believes it should be applied only by the physician. Its full anesthetic action is developed only in diseases of the cornea, especially in the superficial lesions which are usually very painful, but it may act very injuriously by means of its well known detachment of the surface epithelium.

By the physician cocaine should be used:

a.—As anesthetic. (1) For operative purposes (instillation of a 5 per cent solution). Where additional effect is required it may be injected beneath the conjunctiva, or adrenalin hydrochlor (1:1000) may be instilled. (2) Often advantageously in photophobia, as in eczematous conjunctivitis.

b.—As a mydriatic. (1) For purpose of investigation. (2) As adjunct to other mydriatics, especially atropine. In place of frequent instillations of atropin-cocaine, which may readily produce toxic symptoms, and not give the desired effect, Fuchs recommends first cocainization as for operation, and then the use of a crystal of atropine in the conjunctival sac. The nasal duct should be closed by drawing the lower lid downward, and pressing over the lachrymal sac.

Intraocular Tuberculosis in Children, and Remarks on the Differential Diagnosis between Tuberculosis and Retinal Tumors.—Carl Emanuel (*Klinische Monatsbl. f. Augenheilke,* Oct., 1902) describes three cases of tuberculosis of the eye in children, two of which were diagnosed glioma, while in the third the diagnosis was not positively made. The first was an isolated tubercle of the choroid, which projected forward in the interior of the eye, and caused ectasis of the sclera. The second was an isolated tubercle of the sclera, in the posterior pole, with secondary involvement of the choroid—apparently a unique case. The third involved the choroid, and secondarily the retina, and vitreous. Emanuel discusses the points made by Lagrange for the differential diagnosis between tubercular pseudotumors, and true intra-ocular growths, and finds that they are by no means applicable in every case, and that occasionally errors in diagnosis can not be avoided.

The Treatment of Tuberculosis of the Iris with Tuberculin TR.—M. Handmann (*Klinische Monatsbl. f. Augenheilk.*, Oct., 1902), following Schieck's experiments, has treated two cases of tuberculosis of the iris by injections of tuberculin TR into the forearm and thigh every other day. The dose was at first very small, 1/1000 mgr. every other day, and was increased gradually during the course of two months to 3 mgr. (at first slow increase in the dose, then quicker (0.001, 0.002, 0.003, etc., up to 0.01, then 0.011, 0.012, 0.013 to 0.02, then 0.03, 0.04 to 0.1, 0.15, finally 2.0 in case 2, and 3.0 mgr. in case 1). Altogether 31 injections were given in each case. At the same time local treatment by hot compresses and atropine instillations was kept up. In the first case, a boy of 11 years, there was no elevation of the temperature, and only after injections of large doses of the tuberculin, was there any local inflammation, which did not, however, go on to abscess formation. In the second case, a girl of 21 years, there was more reaction after the injections, the temperatures occasionally ranging 2° C., above normal. After two weeks very decided improvement appeared in each patient, the characteristic nodules in the iris disappeared, and both were discharged entirely cured, with full vision at the end of two months. Handmann admits that the cases may have been not very virulent forms of tuberculosis, but claims that if the iris tuberculosis is a secondary infection, the methods of treatment should be directed to the general condition, and should not be purely local.

Insufflation of Air into the Anterior Chamber, a New Method for the Treatment of Tuberculosis of the Iris and Cornea.—C. H. Felix (*Zeitschrift f. Augenheilk.*, Nov. & Dec., 1902) reports two cases of tuberculosis of the iris, and one of tuberculosis of the cornea, in which the process was arrested by means of insufflation of air into the anterior chamber, a treatment based upon the good results obtained in tubercular peritonitis, by operative interference. Detailed clinical histories are given, and the method is described as follows: After the usual cleansing of the field of operation and anesthetization of the surface by instillation of cocaine, an ordinary discission needle is passed through the cornea into the anterior chamber, and then cautiously withdrawn. Through this opening the canula of a Pravaz syringe is entered, after the syringe has been half filled with sterile air (drawn in through a piece of sterilized cotton). The aqueous is then drawn slowly into the syringe, the piston being held on a lower level than the anterior chamber. As soon as the chamber is entirely empty the air is forced in, without withdrawing the canula, care

being taken to avoid increasing the intra-ocular pressure beyond the normal. The eye is then bandaged. These insufflations of air were repeated about once a week for from three to twelve weeks. No untoward reaction was observed and the air was usually absorbed and replaced by aqueous in a few days. Felix believes that the results are not to be ascribed to the mere paracentesis and removal of the aqueous, but to the action of one of the constituents of the air—probably the carbonic acid—upon the tubercular tissue.

The Normal Size of the Pupil According to Measurement Made in the Clinic.—As the result of examinations of the pupils in 1,000 patients of different age, sex and refractive conditions, Tange (*Archiv. f. Augenheilk,* Oct., 1902), reaches the following conclusions:

1. The size of the pupil varies greatly.
2. Women have wider pupils than men.
3. The "physiological size of the pupil" decreases with age.
4. The pupil is narrower in hypermetropia than in myopia.
5. It decreases with the degree of hypermetropia.
6. It is wider in myopes up to the twentieth year, than in emmetiopes.
7. In increasing age, the differences between the "physiological width" in various refractive conditions are less decided. Beyond the fortieth year, they are unimportant.
8. The color of the iris has no influence on the size of the pupil.

Tange believes that the smaller pupil in hypermetropia is due to the increased normal tone of the sphincter muscle, which results from the more constant use of the effort of accommodation. For the smaller pupil of old age he assumes a greater weakening of the dilatator muscle than of the sphincter.

The Diagnosis, Prognosis, and Treatment of Perforating Infected Wounds of the Eye.——O. Schirmer (*Arch. f. Ophthal,* 53-1, p. 1.), believes that the prognosis of perforating wounds depends less upon the seat of the injury than upon the question whether the wound has been infected or not. In most of the older, and even in the more recent statistical papers on this subject, this classification has not been sufficiently insisted upon. The infected wounds are usually designated as very unfavorable and set aside in a few words as not coming into consideration so far as the practical preservation of sight is concerned. Schirmer, however, has collected his cases occurring in recent years, and comes to the conclusion that the prognosis of infected wounds is not so bad as is usually assumed. He distinguishes three types, which, however, can not always be sharply separated.

I. *Uveitis serosa traumatica,* a very rare, chronic inflammation of the anterior uveal tract, associated with deposits on Descemet's membrane, which, in the few cases described by him several years ago (to which he adds three new ones) have always ended in recovery. Much more important than this is

II. *Uveitis fibrinosa traumatica,* that slow, insidious inflammation, with its bad prognosis, both for the injured eye and for its fellow. It is of very great importance to determine whether the inflammation is confined to the anterior segment of the eye, or whether it is complicated by an abscess of the vitreous. This is often very difficult to determine with certainty. As a view of the media of the eye is impossible, other symptoms must be relied upon. The surest sign of an invisible abscess of the vitreous is a dense, grayish exudate appearing in the anterior chamber, in the first few days, which covers the pupil and iris uniformly, and further, an early sensitiveness of the ciliary body on pressure. The *exact determination of the position and depth of the wound* is also of great value in the differential diagnosis. In all cases complicated with abscess of the vitreous, there was a primary injury of the vitreous body. Secondary propogation of pysgenic organisms from the iris or anterior chamber into the posterior segment of the eyeball appears to be very rare, if it indeed ever occurs.

Uncomplicated fibrinous inflammation runs a much more chronic course, under the picture of a moderately severe exudative iritis, and develops so gradually that several days are required to determine that infection has occurred. The course of the condition, however, does not correspond with these slight symptoms. It is much more frequently malignant, especially if the well known signs of a severe involvement of the ciliary body are present.

III. *Uveitis purulenta traumatica.* In addition to the usual rapidly appearing fibrinous exudate, there is pus in the anterior chamber or vitreous body. Complication with abscess of the vitreous makes the prognosis worse. The diagnosis is determined by the points mentioned under II., but is not always certain. Secondary infection of the vitreous is rare. Cases of panophthalmites are not included in the statistics given.

The prognosis of infected wounds, which Schermer from his earlier cases, considers very bad, has become much better since he has used large doses of mercury, which he has also used for a long time in sympathetic ophthalmis. Adult male patients receive, wherever possible, inunctions of from 8 to 9 gr. pro die; women 6 to 88 gr.;

children 1 to 3 gr. If success is to be attained, it is absolutely necessary to begin these treatments early, and maintain it for a long time. In order to secure a more rapid effect he recommends also *intramuscular injections of biniodide of mercury* at the same time. Of course the usual treatment with hot applications, atropine, galvanocautery when required, and subconjunctival injections should be carried out.

His statistics are as follows:

Of thirty-nine cases with *uveitis fibrinosa,* vision was lost in only sixteen (of these, about one-half were combined with abscess of the vitreous), while twenty-three patients retained not only the eyeball but more or less sight. Of twenty-one eyes with *uveitis purulenta, only seven were lost. This makes 60 per cent of recoveries for uveitis fibrinosa and 65 per cent of recoveries for uveitis purulenta.*

NOTES AND NEWS.

ITEMS FOR THIS DEPARTMENT SHOULD BE SENT TO
DR. BROWN PUSEY, 31 WASHINGTON ST., CHICAGO.

Dr. H. V. Wurdeman is in Europe.

Dr. C. R. Holmes, of Cincinnati, is in Europe.

Prof. H. Snellen, of Utrecht, recently celebrated his seventieth birthday.

Dr. G. Haltenhoff has been made professor of Ophthalmology in the University of Geneva.

Dr. John R. Taylor has been elected junior resident surgeon at Wills' Hospital, Philadelphia.

Dr. O. T. Wadsworth has resigned the professorship of Ophthalmology in Harvard University.

Drs. H. E. Peterman and James Bordley, Jr., of Baltimore, Md., are in Europe for the summer.

Dr. S. Ruge has been appointed Privat-docent of Ophthalmology in the University of Greifswald.

The new Schermerhorn pavilion of the New York Eye and Ear infirmary was opened May 11th.

At the New Orleans meeting Dr. G. C. Savage was elected first vice-president of the American Medical Association.

Drs. Frank Todd, of Minneapolis, and F. M. G. Byers, of Montreal, have joined the editorial staff of the RECORD.

Lea Brothers & Co. announce as ready Dr. C. A. Veasey's "A Manual of Diseases of the Eye for Students and General Practitioners."

"Bolletino dell 'ospedale oftalmico della Provincia di Roma," is the name of a new journal published in Rome. The editor is Prof. M. Scellingo.

The new ophthalmological clinic at the University of Bonn has been completed and is soon to be dedicated. It is equipped with all modern improvements.

Dr. Arnold Knapp has been appointed professor of Ophthalmology in Columbia University; Dr. Ward A. Holden, chief of clinic, and Dr. H. H. Tyson, instructor.

The last legislature of Pennsylvania appropriated $43,000 for the Eye, Ear and Throat Hospital of Pittsburg, and $50,000 for the Wills Eye Hospital of Philadelphia.

The new officers of the Ophthalmic Section of the American Medical Association are Dr. R. L. Randolph, Baltimore, president; Dr. A. E. Bulson, Fort Wayne, secretary, and Dr. Casey Wood, Chicago, delegate.

Dr. S. Ginsberg's Grundiss der Pathologischen Histologie des Auges, which has just appeared, is a book of 487 pages and contains 107 illustrations. It is published by S. Korger, of Berlin, and costs $3.25. It is an excellent work.

The annual dinner of the editors of the RECORD was held at Antoine's in New Orleans, on May 6th. Drs. Casey Wood, Savage, de Schweinitz, Weeks, Gifford, Allport, Ellett, Black, Randolph, Fulton, Shumway and Pusey were present. The report of Dr. Wood showed that the journal is in a most flourishing condition financially.

At the Washington meeting of the American Ophthalmological Society the following officers were elected for the ensuing year: President, Dr. Charles Stedman Bull, New York; first vice-president, Dr. Arthur Mathewson, Brooklyn; corresponding secretary, Dr. J. S. Prout, Brooklyn; recording secretary and treasurer, Dr. S. B. St. John, Hartford.

The following rule was adopted at the New Orleans A. M. A. meeting: "Any member of the Section on Ophthalmology of the Association who has twice permitted his name to be listed on the program of the Section as intending to read a paper, and has failed to attend the sessions at which these papers were due, and to give satisfactory explanation of his absence, shall be no longer eligible to read a paper before this Section until he has attended at least two consecutive sessions."

Continuing the good work begun in the special ophthalmic number of the *Indian Medical Gazette* (Vol. XXXVI, June, 1901), there is an article in the February and March, 1903, numbers of the same journal by Dr. F. P. Maynard, on an Analysis of One Thousand Consecutive Cataract Extractions, and in the London *Lancet*, of May 2nd, 1903, there is An Analysis of a Further Series of 250 Consecutive Operations for Primary Cataract, Performed in the Government Ophthalmic Hospital, Madras, by Dr. R. H. Elliot.

Ophthalmologists living in Chicago and its vicinity will be pleased to learn that the *"Handapparat,"* or reference collection of the late Prof. Schöbl, of Prague, will soon be accessible to them. Prof. Coccius, of Leipzig, began this collection over thirty years ago, and when his library was purchased by Schöbl, the latter greatly enlarged its scope, and brought it up to the date of his death. It now numbers over 1,700 monographs, inaugural dissertations, reprints and other minor works on ophthalmic subjects, arranged on the plan followed in Nagel's *Jahresbericht*. It will form a valuable addition to the already extensive library of the purchaser and will enable writers on ophthalmic subjects to consult the originals of many papers, otherwise difficult to procure.

Another recent and important work is Ocular Therapeutics, by Dr. A. Darier, Paris, France. Translated from the second edition by Sidney Stephenson, M. D., C. M., London, England. This monograph, in 1902, received the Desportes prize from the French Academy of Medicine. It describes in a practical manner the author's methods of employing in opthalmic surgery many of the ordinary therapeutic measures which have proved, after many years' experience at his hands, to be useful. It also brings before the profession the uses of a number of comparatively new remedies. It is a valuable addition to ophthalmic literature and should have a place in the library of every progressive ophthalmologist. The book is well bound and printed with good type. Published by Messrs. J. and A. Churchill, London, England. Price 10s 6d.

At the last meeting of the American Medical Association in New Orleans, the Ophthalmological Section passed a resolution asking that all educational and health boards and state legislatures when possible, recommend the annual examination of school children's eyes and ears by some suitable method. This resolution was endorsed and passed by the house of delegates of the American Medical Asso-

ciation, so that it now comes as an official communication not only from the Ophthalmological Section, but also from the American Medical Association as a whole.

"Whereas, The value of perfect sight and hearing is not fully appreciated by educators, and neglect of the delicate organs of vision and hearing often leads to diseases of these structures; therefore, be it

"Resolved, That it is the sense of the American Medical Association that measures be taken by boards of health, boards of education, and school authorities, and, where possible, legislation be secured, looking to the examination of the eyes and ears of all school children, that disease in its incipiency may be discovered and corrected."

The resolutions passed by the house of delegates of the American Medical Association in regard to the annual examination of school children's eyes and ears by some suitable method, have been adopted and recommended at a recent meeting of South Dakota State Medical Society.

The American Academy of Ophthalmology and Oto-Laryngology (formerly the Western Ophthalmological and Oto-Laryngological Association) had a highly successful annual meeting at Indianapolis, on April 9th, 10th and 11th. The following officers were elected:

Edward Jackson, Denver, Colo., president.
Dudley S. Reynolds, Louisville, Ky., 1st vice-president.
John J. Kyle, Indianapolis, Ind., 2nd vice-president.
John W. Murphy, Cincinnati, O., 3rd vice-president.
Otto J. Stein, Chicago, Ill., treasurer.
Derrick T. Vail, Cincinnati, O., secretary.
Council: Adolph Alt, St. Louis, Christian R. Holmes, Cincinnati, Wm. L. Ballenger and Casey Wood, Chicago.

The academy is now national in scope, and will embrace the entire North American continent.

Memorial to the late Prof. Panas. The following circular speaks for itself. The OPHTHALMIC RECORD trusts that a sufficient sum will be raised for the purpose indicated, and that members of the profession in America will subscribe liberally to the fund:

"The colleagues, friends and pupils of Professor Panas have decided to open a subscription for the purpose of perpetuating the memory of their beloved master. The committee intend to have a medal struck and place a monument in the principal hall of the

Ophthalmological Clinic of the Hotel Dieu, where, for twenty-two years, Panas labored so successfully and so assiduously. Subscribers of at least twenty-five francs will receive a copy of the medal. Contributions should be addressed to one of the secretaries, Monsieur Monthus, 41 rue Godot-de-Mauroi, Monsieur Scrini, 51 Avenue Gabriel, Paris, who will have charge of the funds. We trust you will join us in honoring the memory of the man whom French science has so recently lost."

The circular is signed by the honorary presidents: Prof. Brouardel, honorary dean of the (Paris) Medical Faculty; Prof. Debove, dean of the Medical Faculty; Delyanei, minister from Greece in Paris; Prof. Jaccoud, permanent secretary, and Lancereaux, president of the Academy of Medicine. President: Prof. Guyon, member of the Institute of France. Among the vice-presidents is Prof. Gayet, of Lyon. Of the members, Drs. Albarran, Barette (of ———), Chevallareau, Corgialequo (London), Daviel (Rouen), Druault, Professors Fuchs, of Vienna, Hirschberg, of Berlin, and de Lapersonne, of Paris. Dr. Menacho, of Barulona, Prof. Pflueger, of Berne, Drs. Phronimos, of Cairo, Rochon-Duvigneaud, Sourville (Hantes), Prof. Tartuferi, of Bologna, Dr. Terrien and Prof. van Duyse, of Ghent.

A unique dinner was given April 14th last by the St. Louis Medical Society to four of their ex-presidents, all of whom were over eighty-six years of age. Dr. Simon Pollak, one of these honored guests, was born in Prague, April 14th, 1814, so that the banquet may have been said to be especially his as it was given on his eighty-ninth birthday. The venerable doctor graduated in 1835 at the University of Vienna, and arrived in the United States in 1837. From 1838 to 1844 he practiced medicine at Nashville, Tenn., where he acquired a competence. He came to St. Louis in 1845, where he has since remained. Immediately he entered upon dispensary work, and in 1852, together with James Yeatman, William G. Eliot and others, he founded the Missouri School for the Blind. By Dr. Pollak's personal efforts this school was financially maintained for five years, when it became a state institution. About 1850 he assisted in founding the St. Louis Academy of Science. In 1860 he started the eye and ear clinic at Mullanphy Hospital, the first in St. Louis, and has looked after it until the present.

During the Civil War he was chosen a member of the American Sanitary Commission, and was on the field after the battle of Bull

Run. When the Western Sanitary Commission was established he became a member and did effective work. He was also appointed a hospital inspector, and was given carte blanche in the purchase and distribution of supplies.

Dr. Pollak is a member of the St. Louis Medical Society, once its president, many times its treasurer. He is also a member of the American Medical Association, of the Missouri State Society and various other organizations.

We congratulate Dr. Pollak on his long and honorable career as a physician and ophthalmologist, and reëcho the motto inscribed on the dinner menu. Such a record is, indeed, *"monumentum aere perennius."*

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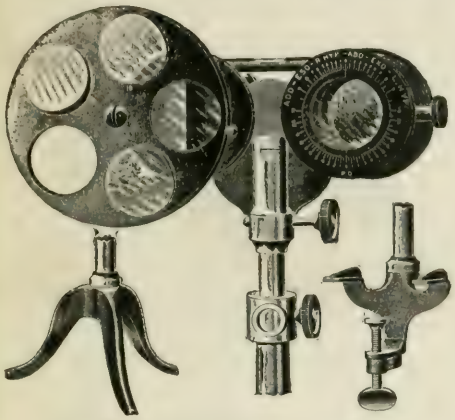

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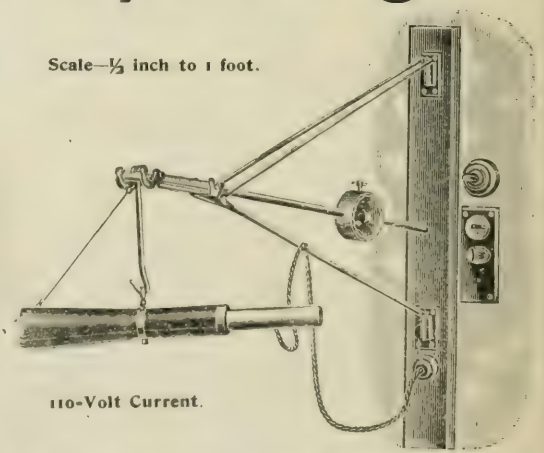

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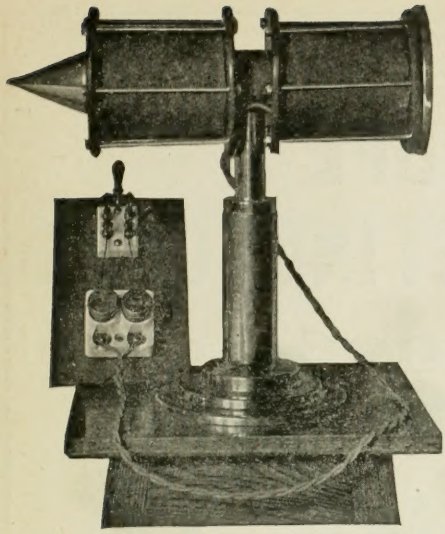

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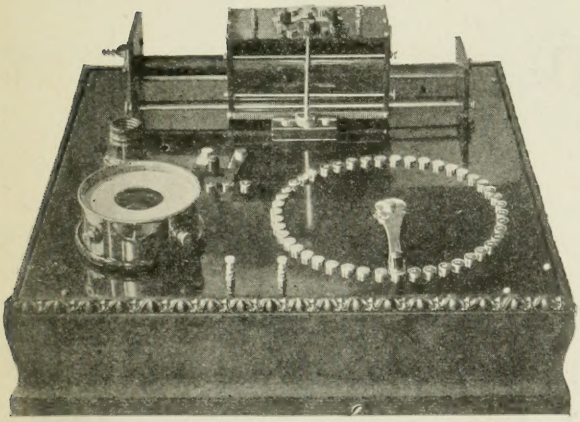

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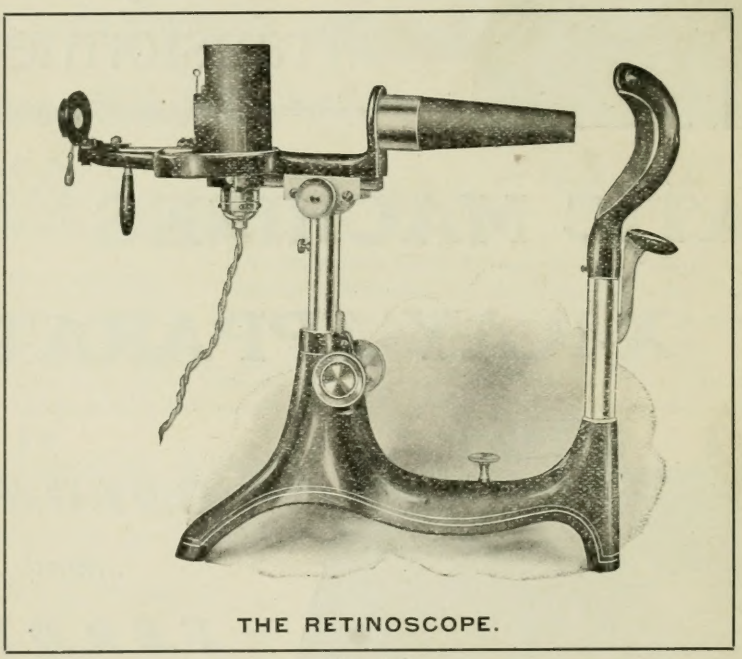

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